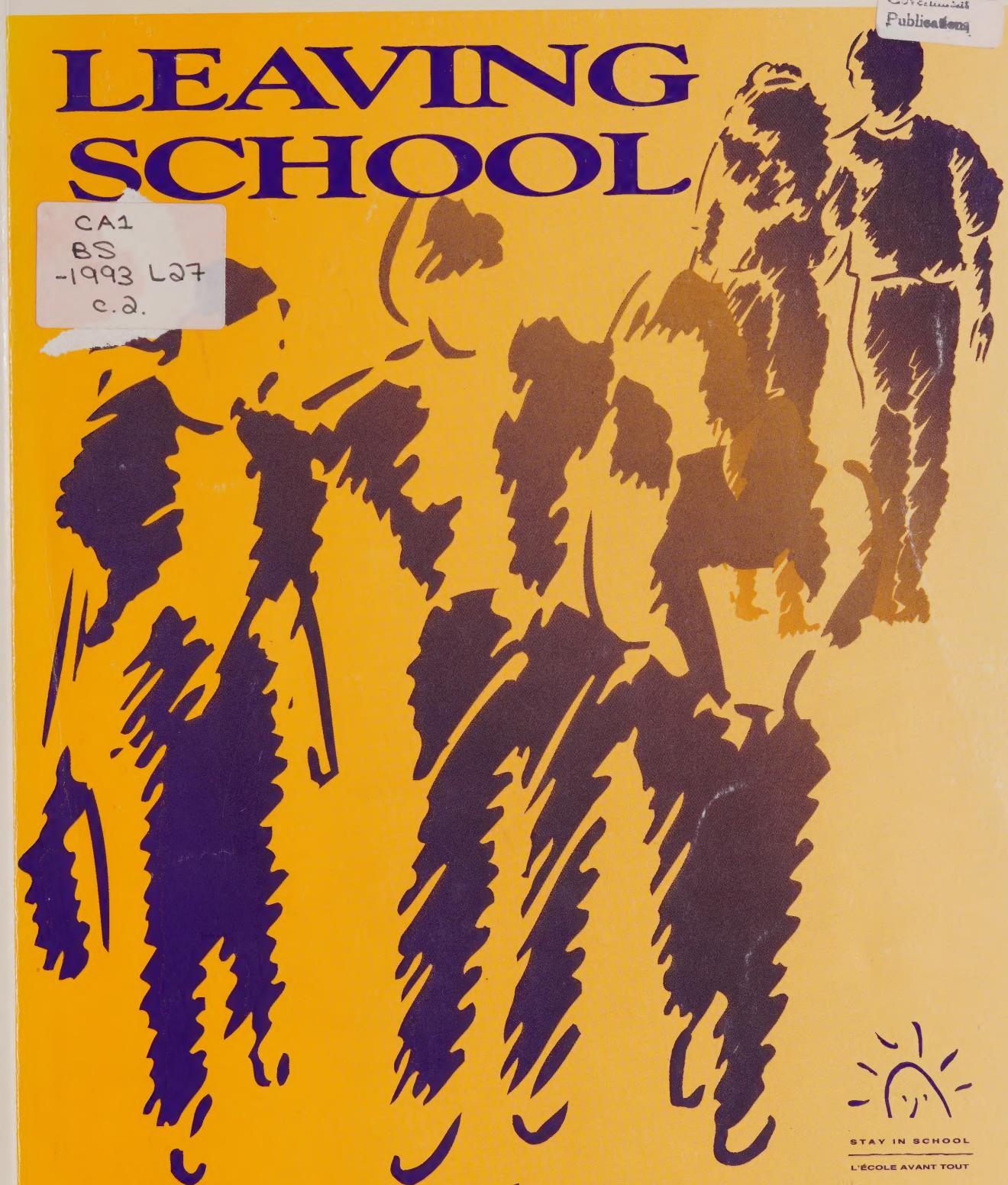


# LEAVING SCHOOL

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Results from a national survey  
comparing school leavers and high  
school graduates 18 to 20 years of age.



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Statistics Canada

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## Leaving School

Results from a national survey comparing school leavers  
and high school graduates 18 to 20 years of age

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*Prepared under contract to Human Resources Development Canada  
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September, 1993*

## SYMBOLS

The following are symbols used throughout this publication:

- .. figures not available
- \* numbers marked with this symbol have a coefficient of variation between 16.6% and 25% and are less reliable than unmarked numbers
- data are not reliable enough to be released; coefficient of variation is greater than 25%

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# Highlights

The number of high school dropouts and the factors influencing premature school departure are strategic indicators of school system functioning. In light of traditionally high estimates of non-completion (30%), Employment and Immigration Canada commissioned Statistics Canada to conduct a School Leavers Survey (SLS) to estimate the magnitude of the problem and to identify the circumstances associated with dropping out.

Using the Family Allowance files as the sampling frame, a stratified random sample of 18,000 18-20-year-olds was selected. A computer assisted telephone interview (CATI) administered from April - June, 1991 obtained demographic/background, school experience, and post-school labour market and other outcome measures, along with whether respondents were in school (continuers), had graduated (graduates) or had left before graduating (leavers). A total of 10,782 individuals were traced (60% contact rate), and 9,460 were interviewed (88% response rate). The respondents represent 184,000 leavers, 241,000 continuers and 711,000 graduates.

The term "dropout" has been used to describe all high school non-completers regardless of the reasons or conditions which mark their leaving. It also carries a pejorative or stigmatizing connotation associated with individual failure. Non-completers are, however, a relatively heterogeneous group. They do not fit the stereotypical picture of a dropout, particularly concerning academic achievement. Consequently, the more neutral designation "school leaver" is used to describe the survey findings. The focus of the report is on comparing school leavers with high school graduates.

A number of techniques and data sources used to generate dropout statistics were examined. Taken together, the data indicate that the dropout rate has declined and is much less than the 30% figure usually cited.

The SLS estimates that at the time of the survey 18% of 20-year-old Canadians had not completed high school. The rate for men is higher than for women, 22% compared with 14%. The rates are higher in the eastern provinces and lower in the West and the gap between males and females is greater in the East and less pronounced in the West.

The age and the grade at which students leave without a diploma, however, is surprising. Almost 40% of leavers were age 16 or less when they left school and 32% had Grade 9 education or less.

Leavers were more likely than graduates to come from single and no-parent families, from families who did not think high school completion was very important, and from lower socio-economic backgrounds. Leavers to a greater extent than graduates were married and more had dependent children. Taken together, 69% of leavers (compared with 33% of graduates) came from a 'high risk' background group. The fact that 31% of leavers did not come from the high risk group (10% in fact came from a low risk group) or that 33% of the graduates also came from the high risk group, indicates that there is more to dropping out than family background.

The school experiences of leavers and graduates were also different. Leavers were more likely than graduates to:

- report that they did not enjoy school
- express dissatisfaction with their courses and school rules
- have problems with their teachers
- not participate in extracurricular activities
- participate less in classes than other students
- have friends not attending any school
- associate with peers who did not consider high school completion important

- ◆ not fit in at school
- ◆ skip classes

Recognizing the value of education was an important reason for staying in school, returning to school, and for regretting dropping out.

School performance differed for leavers and graduates, with leavers more likely to have failed an elementary grade, have lower grade averages, and have difficulty with, or fail, core courses such as mathematics, science and English/French.

The majority of leavers, however, were performing satisfactorily while in school; 37% of them had mainly As and Bs and another 40% were getting by with Cs. Almost 50% of leavers who gave personal or family-related reasons for leaving school achieved A or B averages. Individual academic failure is not a factor for these types of leavers.

Despite early failure, lower grade averages, and difficulty or failure in core courses, some students stay or return to graduate at a later time.

Enjoyment of school, interesting classes and class participation influenced school grade averages, especially those of leavers. Graduates were able to achieve top marks, regardless of these factors. For leavers these factors made a great deal of difference. Leavers were almost twice as likely to achieve A and B averages if they enjoyed school, participated in class or thought that their classes were interesting.

Part-time employment was related to school-leaving, with lower leaver rates coming from students who worked less than 20 hours per week during the school year, and higher rates for those who worked long weekly hours, or did not work at all. This relationship existed even when academic performance and positive school experiences were held constant.

Although overall rates are low, leavers were more likely than graduates to engage in deviant

behaviours such as regular alcohol consumption, soft and hard drug use.

The labour market and life outcomes of leavers appear to be dismal. Many more leavers than graduates had not taken any further education or training. More leavers than graduates encountered unemployment; worked in blue collar occupations, for men, and service jobs, for women; and, long weekly hours. Despite lengthy hours, both leavers and graduates had low incomes, and leavers had greater dependency on unemployment insurance, social assistance, and family allowances. Financial dissatisfaction was high, particularly for leavers.

In light of long work hours, it may be difficult for leavers to escape from their economic and educational circumstances. More leavers than graduates had difficulty filling out job applications and indicated that their basic skills restricted their job opportunities. Leavers revealed more uncertainty about their future career directions than graduates.

Leavers were less involved than graduates in almost all leisure time activities.

The overall picture which emerges from these data, and which will be examined further, is one of cumulative disadvantage. Leavers appear to benefit less from their family backgrounds, school experiences, academic performance, part-time jobs, and social behaviours. Having left school, they are at a further disadvantage regarding employment, income, and life opportunities.

# 1. Introduction

## WHY THE NEED FOR A SURVEY OF HIGH SCHOOL LEAVERS?

In its short 125 years, Canada has become one of the most affluent countries in the world. Our level of economic prosperity as measured by GNP and GDP per capita is high (ninth and third in the world, respectively), and the growth rate in GDP over the past decade is second only to Japan.<sup>1</sup> Canadians also enjoy long life expectancy, low infant mortality, high education levels, and relatively open access to postsecondary education.<sup>2</sup> According to international comparisons, our overall quality of life or index of human development is first or second in the world.<sup>3</sup>

Concern is growing, however, about some general dimensions of Canadian society: high unemployment levels, the number of female lone parents and children in poverty,<sup>4</sup> illiteracy, the decline in after-tax family income,<sup>5</sup> reduced productivity growth,<sup>6</sup> increased international competition for markets, and the effectiveness of our educational institutions.

There is also growing recognition that these phenomena are closely interrelated. Success in the international marketplace is a function of economic productivity and technological innovation, which in turn, results from the knowledge, skills and determination of a well-educated and well-paid labour force engaged in challenging and satisfying work.

The application of advanced technologies and skills is expected to produce a competitive economy, enjoying international success, a high standard of living, and a good quality of life.

*"We believe that a new vision for the Canadian economy is needed, one in which Canada's natural resource abundance is fully exploited, in which firms and governments focus on creating advanced skills and technology, in which sophisticated home demand drives more firms to create advanced products and processes, in which many more Canadian firms compete*

*globally, and in which competition provides a key stimulus for continual upgrading."<sup>7</sup>*

Concern over Canada's economic prosperity in a highly competitive global economy has led to the recognition that education is a strategic public issue.<sup>8</sup> In a global economy dominated by new knowledge and new technologies, which are increasingly driven by skill, creativity and flexibility, education is of paramount importance.

*"An innovative and more productive economy is ultimately a function of the skills and creativity of people. Technology is developed by people, and it can be exploited fully only if used properly by skilled individuals."<sup>9</sup>*

Based upon emerging changes to Canada's traditional economic structure, it is estimated that 40% of the new jobs created between 1989 and 2000 will require more than 16 years of education and training.<sup>10</sup> Since movement toward an advanced technological and entrepreneurial economy of highly-skilled and well-paying jobs is an important objective on the public agenda, most new jobs in the future will require at least high school graduation or the equivalent, and few will require less than a high school diploma.

Compared with other countries, Canada enjoys high levels of educational attainment, few gender differences in attainment at the secondary level, and good access to postsecondary education. On the other hand, serious concern exists about the acquisition of basic literacy and numeracy skills by secondary students, the content and quality of education, student performance on standardized science and mathematics achievement tests, and the number of students who do not complete high school.<sup>11</sup>

Current estimates suggest that more than 30% of young Canadians do not finish high school. Comparable dropout rates for Japan and Germany, two of Canada's leading competitors, are substantially lower. In Japan, fewer than 2% of students do not complete high school, and in Germany, fewer than 10% do not complete their

high school education.<sup>12</sup> Based on these estimates, the secondary school non-completion rate in Canada is three times as high as in Germany and fifteen times as high as in Japan.

If a considerable proportion of Canada's youth leave high school before completion, it may "...creat(e) a growing group that is often functionally illiterate, largely untrainable and increasingly unemployable."<sup>13</sup> The economic costs of dropping out of high school are significant for Canadian society and for the students who drop out. The cost to Canada over the course of just one school year is estimated to be \$4 billion.<sup>14</sup> Compared with high school graduates, those who do not complete high school have greater chances of unemployment and reduced lifetime earnings. In addition, other negative conditions are associated with premature school departure - poor health, delinquency, crime, substance abuse, economic dependency, and a lower overall quality of life.

Reducing the dropout rate by 3% per year<sup>15</sup> or to 10% by the year 2000<sup>16</sup> requires a sound understanding of the factors that influence school leaving. Is high school non-completion the result of a myriad of individual influences that are beyond policy intervention and amelioration, or is it symptomatic of deep structural problems within our school system that can be remedied?

#### **WHAT DOES THE PREVIOUS RESEARCH LITERATURE INDICATE?**

A considerable body of research has been devoted to determining the causes of dropping out and to identifying the students who are most susceptible. A profile of dropouts includes socio-economic, family structure, high school stream, academic, employment, and psychological variables. Many high school non-completers come from low socio-economic backgrounds,<sup>17</sup> from single-parent households<sup>18</sup>, from basic or general academic streams/programs,<sup>19</sup> have failed at least one course during their high school career, work for pay more than 15 hours a week, have low self-esteem, are frustrated learners with short-range rather than long-range goals, feel

alienated from teachers, peers, and curriculum, and are concrete rather than abstract thinkers.<sup>20</sup> Distinct differences between dropouts and graduates are apparent as early as Grade 3, in that dropouts exhibit academic difficulties and low achievement test scores.<sup>21</sup> By Grade 9, a pattern of failing grades and high absenteeism is evident. There is also agreement that many non-completers have low class attendance rates, exhibit forms of deviant or delinquent behaviour, and in many cases, have been suspended from school at some point.<sup>22</sup>

In recent years, interest in educational cultures and their impacts has been growing. However, as early as 1960, researchers in the United States were investigating possible clashes between mainline academic cultures and adolescent subcultures. Some investigators thought that athletic and social subcultures detracted from academic objectives and thus hindered academic achievement.<sup>23</sup> Others questioned whether the school environment operated in an independent fashion, or if it operated in conjunction with the gender and socio-economic background of students, which, in turn, affect aspirations and achievement.<sup>24</sup> Similarly, in Canada, researchers questioned whether academic stratification in schools strongly determines students' plans and aspirations or whether the system of academic programs in schools is a conduit for socio-economic and ability factors.<sup>25</sup>

Another set of variables used to investigate high school dropouts involves students' attitudes toward the curriculum, peers, teachers, counsellors and rates of participation in extracurricular activities.<sup>26</sup>

Two general orientations regarding the dropping out process<sup>27</sup> have been outlined. The 'frustration-self esteem' orientation suggests that schools do not provide an adequate instructional or emotional environment for students who find learning difficult. Embarrassment and frustration occur when students realize they have difficulty performing at average classroom levels. This leads to low self-esteem, further achievement difficulties, and ultimately, departure from school without a diploma. The 'participation-identification' orientation suggests that students who get involved in school achieve better academic results and develop a sense of

belonging and attachment to school-related goals. This identification with schooling increases participation and produces successful performance outcomes, including graduation.<sup>28</sup>

Regardless of the orientation, the research highlights the importance of learning and the necessity of integrating students into a complex high school culture or system.

## A MODEL TO GUIDE THE ANALYSES

Dropping out of high school is more of a process than a decision made at a particular moment in time. Chart 1-1 presents a model of the influences on, and consequences of, school departure, which is used to guide the descriptive analyses in this report. First, relationships between school completion and background variables such as socio-economic status, family composition, province and gender are explored. Second, high school departure is related to intervening variables such as school experiences, academic performance, employment during school, and deviant behaviours. Third, the

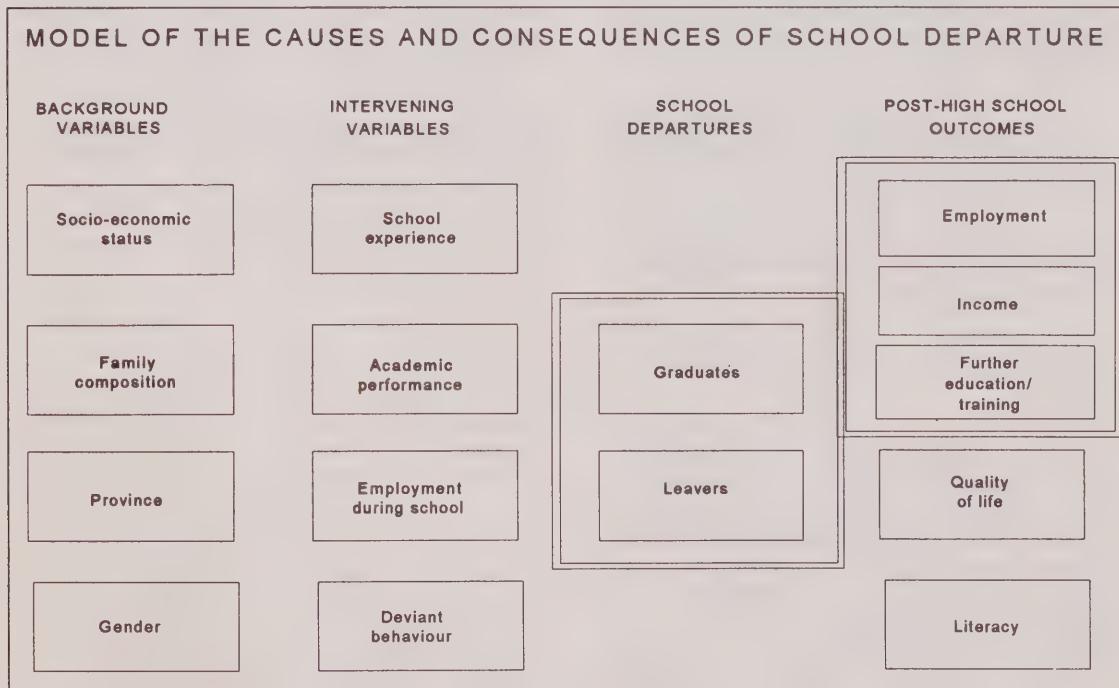
consequences of high school completion versus non-completion are examined in terms of labour force outcomes and broader quality of life issues like literacy and lifestyles.

Descriptive analyses which profile the graduates and the leavers according to antecedent social background or school experience variables and subsequent post-high school employment and lifestyle variables are presented. Students still in school (continuers) are excluded from the analyses. Students who left school at one time and later returned (returners) are brought into the analyses for specific purposes. The focus in the report is on comparing and contrasting the high school leavers with the graduates.

The chapters of this publication parallel the temporal sequence of the variables in the model:

- Chapter 2 examines various techniques for estimating dropout rates, including their advantages and limitations. National and provincial school leaver rates by gender are estimated using the 1991 Statistics Canada School Leavers Survey.

Chart 1-1



- ◆ Chapter 3 examines differences in the demographic and background characteristics of leavers and graduates: family structure, marital status, dependants; education and occupation of parents; place of birth, disability; and linguistic or aboriginal group membership.

- ◆ Chapter 4 compares the high school experiences of leavers and graduates: reasons for leaving; interest in courses; academic and social involvement; friendship patterns; reasons for returning to school after leaving; and reactions to school departure.

- ◆ Chapter 5 investigates how leavers and graduates differ on academic performance, particularly in the core mathematics, science and language courses.

- ◆ Chapter 6 looks at differences in the employment status of leavers and graduates during the school year, and if they did work, the number of hours worked. Their labour force involvement is related to academic performance, school experience, and the likelihood of dropping out.

- ◆ Chapter 7 examines how leavers and graduates differed on deviant behaviours such as alcohol consumption, substance abuse and criminal activities.

- ◆ Chapter 8 presents the employment, income and other post-high school experiences of leavers and graduates.

- ◆ Finally, Chapter 9 outlines the research issues which need to be addressed in the future.

## METHODS: THE SCHOOL LEAVERS SURVEY

The School Leavers Survey was conducted by Statistics Canada from April to June 1991, under the sponsorship of Employment and Immigration Canada. Using Family Allowance files as the sampling frame, a stratified random sample of 18,000 18-20-year-olds was selected. A computer assisted telephone interview (CATI) obtained demographic/background, school experience, and post-school labour market and

other outcome measures, along with whether respondents were in school (continuers), had graduated (graduates) or had left before graduating (leavers). A total of 10,782 individuals were traced and contacted (60% contact rate), and of those, 9,460 were interviewed (88% response rate). The respondents represent 184,000 leavers, 241,000 continuers and 711,000 graduates. A full description of the survey methodology is presented in Appendix A.

## TERMINOLOGY

In this chapter, the words dropout, non-completer, and school leaver have been used interchangeably. This reflects usage in the research literature and general culture. Unfortunately, 'dropout' is one of the more misused terms today. It has been used to describe all high school non-completers regardless of the reasons, conditions or circumstances which mark their leaving. It also carries a pejorative or stigmatizing connotation associated with individual failure. Non-completers are, however, a relatively heterogeneous group. They do not fit the stereotypical picture of a dropout, particularly concerning academic achievement. Consequently, the more neutral designation 'school leaver' is used predominantly in this publication. Chapter 2 presents some definitions and distinctions which are then used throughout the remaining text.

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## 2. Estimating the high school non-completion rate

Research studies, policy documents and media reports indicate that an estimated 30% of students begin, but do not finish, high school. This estimate is so ingrained in our national public consciousness that it appears to vary neither across studies nor over time.

Unfortunately, there is no standard method for calculating a high school non-completion rate. Rather, it has been estimated in a number of ways, each of which measures a different phenomenon, produces a different picture of leavers, and has certain advantages and limitations.

Data on high school non-completion come from two general sources, administrative records and survey data. The administrative records of educational institutions can be used to examine the pattern of school attendance and completion, or the student-aged population can be asked directly about their school completion history. There are five commonly reported estimates of high school non-completion:

- Estimates based on administrative data;
  - the complement of the 'graduation rate'
  - the 'apparent cohort dropout rate'
- Estimates from survey data;
  - the census
  - the labour force survey
  - the school leavers survey

A comparison of the estimates produced by these approaches is contained in Appendix B.

### ESTIMATES BASED ON ADMINISTRATIVE DATA

#### The Complement of the Graduation Rate

The publication A Statistical Portrait of Elementary and Secondary Education in Canada<sup>1</sup> presents graduation rates for Canada and the provinces, 1988-89 and 1989-90. The graduation rate is defined as the number of graduates of a given age group compared to the total population for that same age group. The graduation rate is calculated by summing the age-specific graduation rates, i.e., the number of graduates aged 15 divided by the population aged 15 + the number of graduates aged 16 divided by the population aged 16...+ the number of graduates aged 20 or above divided by the population aged 20.

The complement of this graduation rate is the rate of high school non-completion among 15-to-20-year-olds, which has been used as an estimate of the dropout rate. According to this calculation, the rate for Canada declined from 33% in 1988-89 to 31% in 1989-90 (Table 2-1). These rates are very close to the 30% figure usually cited as the high school dropout rate. This approach yields high non-completion rates over these two years for Alberta (39-40%), British Columbia (37-36%), Quebec (36%), and Newfoundland (36-33%). For two provinces, New Brunswick and Ontario, the rate drops substantially from one year to the next.

Complement of the graduation rate data are accessible, objective, and because they are already there for another purpose, relatively inexpensive to analyze. The graduation rate has been widely discussed among the provinces within the Council of Ministers of Education, Canada (CMEC) and, as published in the joint CMEC/Statistics Canada publication, A

Statistical Portrait of Elementary and Secondary Education in Canada, has been accepted and recognized as an inter-provincially comparable figure.

**Table 2-1 Complement of the graduation rate, Canada and the provinces 1988-89 and 1989-90.**

	%	
	1988-89	1989-90
<b>Canada</b>	<b>33</b>	<b>31</b>
Newfoundland	36	33
P.E.I.	25	24
Nova Scotia	31	30
N.B.	22	17
Quebec	36	36
Ontario	30	26
Manitoba	28	27
Saskatchewan	26	25
Alberta	39	40
B.C.	37	36

Source: *A Statistical Portrait of Elementary and Secondary Education in Canada*, Statistics Canada and the Council of Ministers of Education, Canada, July 1992.

This technique, however, represents a synthetic cohort not an actual one. As such, it mixes or adds the age-specific completion rates to arrive at an estimate of completions, or conversely, non-completions. The use of the "complement" of the amalgamated graduation rate represents the chance of not graduating in a specific year for those 15 years old and above. It does not allow the analyst to identify the non-completion rate of an actual age cohort as it moves through high school. This approach also deals exclusively with regular daytime high school non-completion. It does not deal with any subsequent equivalent, alternative or advanced education. Nor does it accommodate interprovincial migration or analyses by demographic or background variables. Year to year changes in the data may reflect changes in record keeping systems rather than changes in student behaviour.

### **The "Apparent Cohort Dropout Rate"**

The "apparent cohort dropout approach" uses administrative enrolment and graduation counts to simulate the progress of an entering cohort through to graduation or non-completion. From high school enrolment and graduation data (administrative school records provided by provincial ministries of education), it is possible to compare the number of students who enter Grade 9 in a particular year with the number of high school graduates three and four years later. The complement of this estimated cohort graduation ratio is the "apparent" dropout rate or the "apparent" non-completion rate. Since individually linked records are not traced or compared over time, this represents a rough graduation or departure estimate.

Rates for Canada calculated on this basis show an overall decline from 46 % in 1975-76 to 32% in 1990-91 (Table 2-2). This approach produces high rates for Alberta, British Columbia, Ontario, and substantial change over short time periods in a number of provinces.

This approach is inexpensive and uses existing, accessible, objective data and an established methodology. It can adjust for deaths and migration, but is less successful in dealing with (a) program changes within the system, such as students who transfer to a vocational or work experience program, thereby putting them out of step with their entering cohort, (b) students who graduate early, (c) students who take more than four years to graduate, (d) any equivalent, alternative or advanced education taken after leaving school, (e) changing administrative definitions (eg. special education students included in Grade 9 or in ungraded enrolment) or means of record keeping.

**Table 2-2 Apparent cohort dropout rate for secondary school students (Grade 9+), Canada and the provinces**

	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	
Year of graduation	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	
Year of Grade 9 cohort	46	47	39	38	36	38	36	36	33	28	29	30	30	N/A	N/A	34	32
(Percent)																	
Canada	46	47	39	38	36	38	36	36	33	28	29	30	30	N/A	N/A	34	32
Newfoundland	44	43	41	41	44	47	41	N/A	39	35	38	34	32	31	29	25	25
Prince Edward Island	41	40	33	34	31	30	28	28	25	29	28	27	27	27	23	24	24
Nova Scotia	N/A	33	30	30	30	28	27	25									
New Brunswick	37	35	30	30	28	29	26	22	21	19	22	23	20	21	21	16	15
Quebec	56	33	34	33	31	31	24	17	21	21	23	23	30	37	37	34	28
Ontario	45	45	43	40	40	36	37	38	32	33	32	33	33	N/A	N/A	34	34
Manitoba	37	42	38	37	32	32	34	27	28	29	31	31	31	29	27	27	27
Saskatchewan	39	36	29	33	35	34	34	30	27	27	28	29	29	23	27	24	24
Alberta	44	45	43	47	46	46	45	42	36	35	34	34	36	37	36	35	35
British Columbia	42	40	39	37	36	38	36	32	30	30	33	37	36	35	35	34	34
Yukon	67	65	56	59	61	66	65	60	61	53	37	62	61	63	54	51	51
Northwest Territories	70	67	77	74	75	71	74	71	74	65	66	68	66	69	74	68	68

Source: Education, Culture and Tourism Division, Statistics Canada

To an unknown extent, the graduation cohort will contain students from different entering cohorts (students who have returned or students from an earlier cohort who are taking longer to finish) and, therefore, may balance off any changes in completion time of an entering cohort. The most severe limitation of this technique may be that in mixing so many factors it becomes impossible to discern the unique effect of changes to cohort graduation rates or to completion time. Because the calculations are based on a long time period (3-4 years), there is an inherent lag in reflecting changing patterns. In addition, this technique does not permit analyses by demographic or background variables.

#### DROPOUT POOL ESTIMATES BASED ON SURVEY DATA

The dropout pool approach uses cross-sectional, static counting surveys to estimate the proportion of an age group not attending school and without a high school diploma or certificate at a particular time (year).

From survey data, it is possible to calculate the proportion of any age group that does not have a high school diploma. If all age groups are included, this would represent the dropout pool or the percentage of non-completers in the general population, but not the current rate at which the school-age population is dropping out (i.e., some members of this pool would be 65 years of age and older).

If the dropout pool calculation is limited to 15-24-year-olds, i.e., an age-specific dropout pool, many in this age group will still be in school, and of those who are not, some may return to school (temporary departures) and eventually graduate. It is necessary, therefore, to distinguish continuers from non-completers (both are without a high school diploma, but the continuers are still working on it) and to select an age group by which time most people will have completed their education. This accommodates temporary absences from school (stopouts) and longer completion times.

By combining survey information on school attendance (not currently enrolled) with educational attainment level (no high school diploma), an estimate of the pool of non-completers among young adults can be obtained. With survey data, it is also possible to exclude from the dropout calculation those who have completed equivalent, alternative or advanced education.

#### Census Estimates

Special Census tabulations indicate that 18% of 20-year-olds in 1991 were not attending school (either full-time or part-time), were without a secondary school graduation certificate and were without further training (Table 2-3). The age-specific estimates for those under 29 years of age vary only slightly, remaining at 18-19% and rising to 20% for those age 26-28. If individuals with further training are included in the calculation, the total pool of non-completers in the population increases to 21% for those age 20, and to 30% for those age 26-28. While the proportion of people without further training varies little up to the 26-28-year-old age group, the percentage with further training increases with age (Table 2-3).

Table 2-3 Age specific dropout pool estimates<sup>1</sup> based on 1991 Census data for Canada

Age	% Without further training	% With further training	Total %
20	18	3	21
21	19	5	24
22	18	6	24
23	18	7	26
24	19	8	27
25	19	9	28
26-28	20	10	30
29	22	10	32
30+	39	11	50

<sup>1</sup> % not attending school (full or part-time) and without a secondary school graduation certificate.

Similar calculations can be performed with 1981 Census data to examine any change over time. In 1981, 29% of 20-year-olds were not attending school, were without a high school diploma or certificate and were without further training (Table 2-4). Again, the age-specific proportion without further training varies substantially only after age 29. Between 1981 and 1991 there was a 10-11% decline in the proportion of young non-completers without further training. There was also a decline between 1981 and 1991 in the percentage of non-completers at each age with further training, although the difference becomes relatively less as age increases (Table 2-4).

This approach produces dropout pool estimates for those without further training which are higher than the national average in all provinces except Ontario (15%) and Quebec (18%) (Table 2-5). For all non-completers, the provincial estimates are higher than the national average (21%) in all provinces except Ontario (16%).

**Table 2-4 Age specific dropout pool estimates<sup>1</sup> based on 1981 Census data for Canada**

Age	% Without further training	% With further training	Total %
20	29	6	36
21	29	8	37
22	29	9	38
23	29	10	39
24	29	10	39
25	28	11	39
26-28	26	12	38
29	26	12	38
30+	50	13	63

<sup>1</sup> % not attending school (full or part-time) and without a secondary school graduation certificate.

**Table 2-5 Dropout pool estimates<sup>1</sup> for 20-year-olds based on 1991 Census data, for Canada and provinces**

	% 20-year-olds without further training	% 20-year-olds total
<b>Canada</b>	<b>18</b>	<b>21</b>
Newfoundland	25	29
P.E.I.	21	24
Nova Scotia	21	26
New Brunswick	20	22
Quebec	18	23
Ontario	15	16
Manitoba	24	26
Saskatchewan	22	26
Alberta	23	26
B. C.	19	22

<sup>1</sup> % not attending school (full or part-time), without a secondary school graduation certificate, without further training, and total (with and without further training).

Advantages of using Census data are: (a) the educational attainment information is based on a 20% sample of the entire population and therefore is subject to a very small sampling error, (b) a periodic benchmark for educational attainment is provided along with many other personal and household characteristics which provide a rich analytic basis for further analyses, (c) more complete coverage of the educational attainment of the population is provided, which may get around possible differences in the administrative records of education jurisdictions.

Limitations of using the Census to produce these kinds of estimates include: (a) as with other respondent surveys, it depends upon respondents' accurate self-evaluation and reporting of their level of educational attainment, (b) it reports educational attainment by the current residence of the respondent and not by the location of their schooling, although some adjustments are possible utilizing the mobility variable, (c) it is conducted every 5 years, and the data are usually available about 18 months to 2 years after collection.

## Labour Force Survey Estimates

Labour Force Survey information is based on approximately 200,000 individuals (10,000 new households per month). Annual average high school non-completion estimates may be generated by examining the educational attainment levels of 20-year-old respondents. This approach yields a national non-completion estimate of 20% for 20-year-olds in 1991, and provincial estimates which range from 16% (British Columbia) to 24% (Alberta and Prince Edward Island) (Table 2-6).

Advantages of using the Labour Force Survey include: (a) this technique can offer a very timely reflection of the school leaving phenomenon, (b) data are used to compare school non-completion rates among the OECD countries, (c) as the measure of educational attainment is part of the broader coverage of the Labour Force Survey, it can be readily linked analytically to employment measures and thereby, economic trends.

Table 2-6 High school non-completion rates based on 1991 labour force survey data (annual averages)

	% 20-year-olds
Canada	20
Newfoundland	23
P.E.I.	24
Nova Scotia	22
New Brunswick	20
Quebec	19
Ontario	21
Manitoba	21
Saskatchewan	18
Alberta	24
British Columbia	16

Limitations of the LFS are: (a) the data rely on self-reported or proxy information (i.e. information given by another member of the household) and therefore may not always accurately report educational attainment, (b) the data also reflect where the respondent is currently living, not necessarily where she/he was

schooled, (c) estimates are subject to sampling error.

## The School Leavers Survey

The School Leavers Survey was designed to estimate the rate of high school non-completion among young adults and to investigate the factors related to non-completion. From April through June 1991, Statistics Canada asked 9,460 individuals aged 18 to 20 a number of questions relating to their school attendance and educational attainment. The following is a short glossary of terms used in the School Leavers Survey:

- graduates or completers = those who have received a secondary school diploma or certificate
- returners = those who left school at one time but returned
- continuers or persisters = students currently enrolled
- stopouts = those temporarily not attending school
- non-completers or leavers = those who are not currently enrolled and have not received a high school diploma or certificate
- leavers with further education = leavers with further education or training
- leavers without further education = leavers without equivalent, alternative or advanced education or training.

Often the terms high school leaver, non-completer and dropout are used interchangeably to indicate students who have left school without receiving a diploma or certificate. However, the term dropout has a pejorative and stigmatizing connotation usually associated with individual failure. As Vincent Tinto suggests, 'dropout' is one of the more misused terms today. "It is used to describe the actions of all leavers regardless of the reasons or conditions which mark their leaving."<sup>2</sup> Accordingly, the more neutral designation, 'high school leaver,' is used to describe the SLS findings.

The School Leavers Survey also included questions on a variety of variables that are not

available from the other methods of estimating high school non-completion rates. For example, respondents were asked about their interest in classes, their academic records, and the importance that their family and friends attached to high school completion.

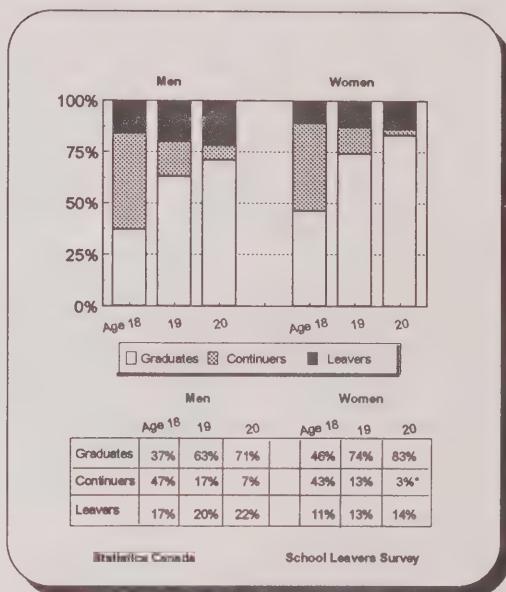
In preparation for the survey Statistics Canada conducted 38 focus groups across Canada with school leavers, students, teachers and education specialists.<sup>3</sup> The qualitative research revealed that from the students' point of view, leaving school without graduating is not a unique event but a process.<sup>4</sup> During a focus group session one school leaver said "I did not drop out; I just faded out."<sup>5</sup> Some students leave school, return and leave again without a high school diploma. Other students leave school temporarily and return to graduate. For example, 12% of the total SLS sample (5% of the graduates, 37% of the continuers, and 33% of the leavers) had left school and returned. These results support the view that for many students, leaving school is a process, not a singular event. This fact has important implications for the estimation of rates and for the identification of explanatory factors.

### Respondents to the School Leavers Survey

Of the 9460 young adults aged 18 to 20 in the survey, 63% were graduates, 21% were still in school (continuers), and 16% were leavers. These respondents represent 184,000 leavers, 241,000 continuers and 711,000 graduates. To estimate the high school non-completion rate for the relevant population, calculations must be based on the older age group to allow for delayed completions (longer time-to-completion for whatever reason, e.g., stopouts, transfers, etc). The importance of age is demonstrated in that for both male and female SLS respondents, the higher the age, the fewer the number of continuers, and the greater the number of graduates and leavers (Chart 2-1). A substantial gender difference exists in that at age 20 more women than men have graduated (83% compared with 71%), and fewer women are continuing in high school or have left before completion.

Chart 2-1

Education status of SLS respondents, by age and gender



Many of the 20-year-old continuers will graduate, thereby raising the graduation rate; others will leave high school before obtaining their diplomas, thereby raising the leaver rate. On the other hand, some of the 20-year-old leavers will return to high school and finish, or will eventually obtain equivalent or better educational qualifications even though they do not have a high school diploma. For example, 17% of leavers indicated they were currently enrolled in, had completed, or had taken some kind of post-high school education or training. If only a third of these leavers ultimately complete their programs, almost another 6% will have received equivalent or higher educational certification.

With the current SLS data and sample, it is impossible to estimate the impact of these and other non-traditional education routes on the school leaver rate. Follow-up studies and longitudinal research would provide the data for such calculations and permit more accurate estimation of final school leaver rates.

## School Leaver Rates Based on the SLS

According to the SLS, the school leaver rate for Canada is 18%. For reasons indicated above, this estimate is based on the oldest respondents in the survey, those age 20. School leaver rates for 20-year-olds were generally higher in the eastern provinces than in the west (Chart 2-2). The rates were much higher in Prince Edward Island (25%) and Newfoundland (24%), than in Alberta (14%), Saskatchewan (16%) and British Columbia (16%).

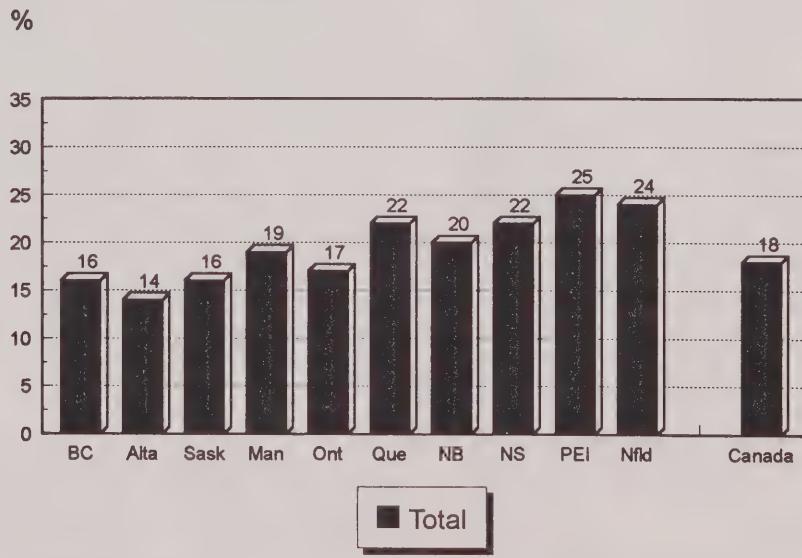
As well, school leaver rates for men were very high relative to female rates in the eastern provinces (33% versus 17% in Prince Edward Island; 29% versus 13%\* in Nova Scotia; and 29% versus 19% in Newfoundland). However, in the west, the difference was less pronounced (16%\* for both men and women in Saskatchewan; 20% versus 18% in Manitoba; 17%\* versus 14%\* in British Columbia; and 16%\* versus 12%\* in Alberta). In other words,

the gap between the male and female rates narrowed from 10-16 percentage points in the east to 0-4 percentage points in the west (Chart 2-3).

The advantages of the special one-time SLS survey are that it is strategic and up-to-date, includes demographic and attitudinal variables, and can provide an important basis for tracking students longitudinally. The data from the survey reflect the stages of the school leaving process ("leaving", "returning", "continuing", "completing") rather than representing the phenomenon as a one-time event ("dropping-out"). In addition, the survey can identify province of schooling as it asked for the respondent's location of schooling as well as the location of their current residence.

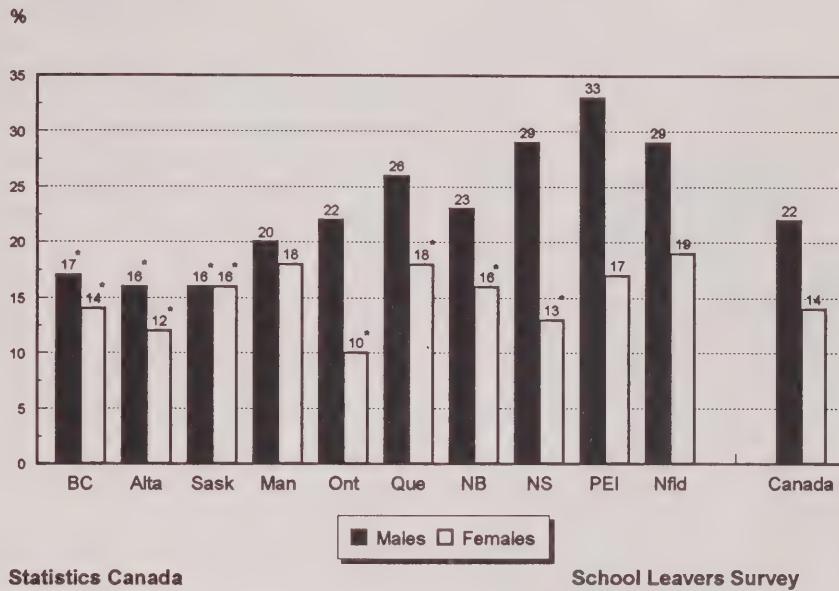
The limitations of the SLS are: (a) the estimates are subject to sampling error; 60% of the sample was contacted and of those 88% were interviewed, (b) education and training after age

**Chart 2-2**  
School leaver rates of 20-year-old respondents, by province



Statistics Canada

School Leavers Survey

**Chart 2-3****School leaver rates of 20-year-old respondents, by province and sex**

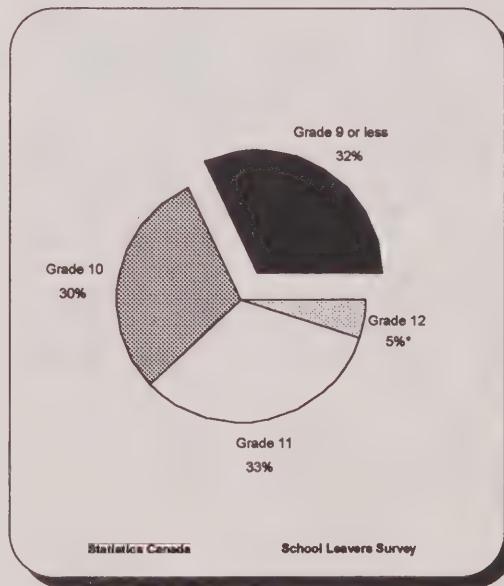
Statistics Canada

School Leavers Survey

20 is not captured, (c) it relies upon accurate self-reporting, (d) it is a one-time survey and cannot produce estimates of trends.

### The Depth of School Leaving

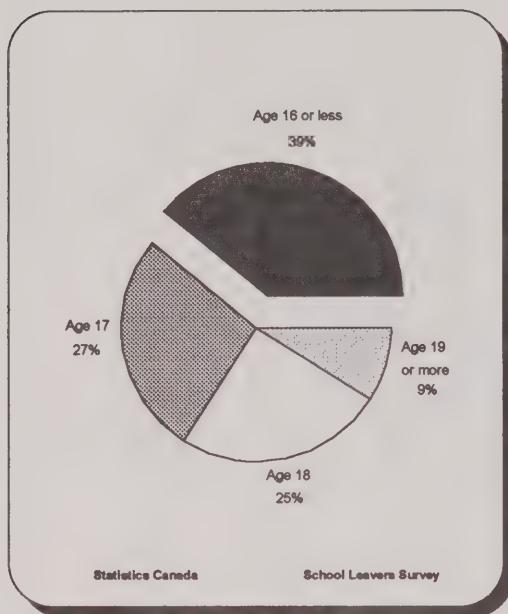
How much education do leavers receive before they quit school? The majority (62%) had Grade 10 or less, and almost a third (32%) had Grade 9 or less (Chart 2-4). Equally surprising are the ages at which they left school: 17% were 14 or 15, younger than the minimum school-leaving age of 16. Another 21% were 16 years old. Thus, almost 40% of the leavers were 16 or younger when they left school (Chart 2-5). In the current economic climate, the labour force prospects for young people with Grade 10 education or less are very dim.

**Chart 2-4****Highest grade completed by leavers**

Statistics Canada

School Leavers Survey

Chart 2-5  
Leavers' age at time of departure



## REFERENCES AND NOTES

- <sup>1</sup> Council of Ministers of Education, Canada and Statistics Canada, 1991.
- <sup>2</sup> Vincent Tinto. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago: University of Chicago Press, 1987.
- <sup>3</sup> *A Qualitative Report on School Leavers* is available from Doug Higgins, Chief, Projections and Analysis Section, Education, Culture and Tourism Division, Statistics Canada.
- <sup>4</sup> Other research comes to the same conclusion. cf: R. W. Rumberger. "High school dropouts: a review of the issues and evidence." *Review of Educational Research*, 57, 1987.
- <sup>5</sup> Price Waterhouse. "Qualitative Research Related to the School Leavers Questionnaire." Final Report, October 25, 1990.

### 3. Who are the leavers?

#### INTRODUCTION

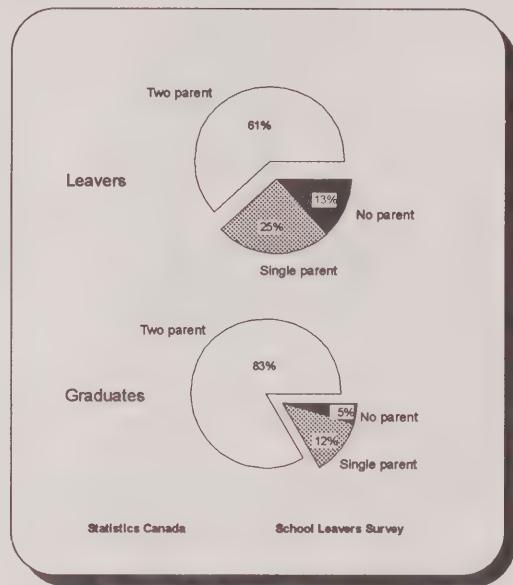
A number of socio-economic factors are associated with the likelihood that individuals will leave school before they graduate. These factors include family structure, marital status, and family responsibilities; parents' education and occupation; geographic location (urban or rural); cultural characteristics such as language and immigration status; and whether or not they have physical disabilities. The background characteristics of leavers, in fact, differed from those of their contemporaries who were high school graduates. Moreover, the combination of several characteristics seems to be associated with a heightened risk of leaving school before graduation. Knowing which groups exhibit a high risk of leaving school prematurely may aid in the development of dropout prevention programs.

#### FAMILY STRUCTURE

The family may provide a stable environment for children, which promotes learning. And indeed, the family situations of leavers and graduates differed sharply.

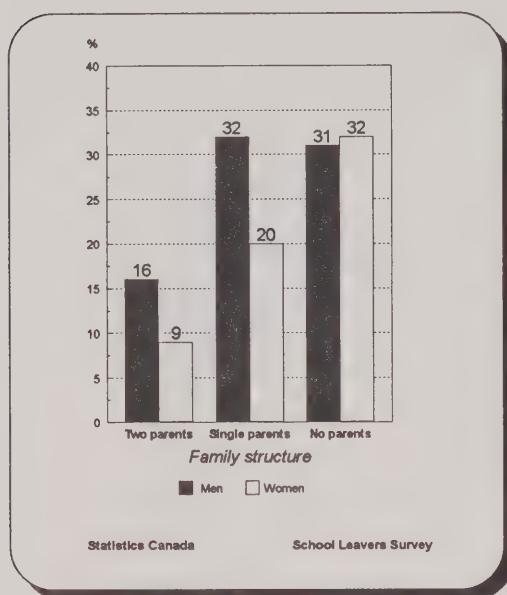
Most individuals reported that during their last year of school they had lived in a two-parent family. Overall, a relatively small minority of students had lived in lone-parent (15%) or no-parent (7%) families.<sup>1</sup> However, students from these family situations were far more likely to be leavers than were those from two-parent households. Fully 25% of leavers had been in lone-parent families, double the proportion for graduates (12%) (Chart 3-1). Similarly, 13% of leavers had not lived with either parent during their last year of school, compared with only 5% of graduates.

Chart 3-1  
Family structure

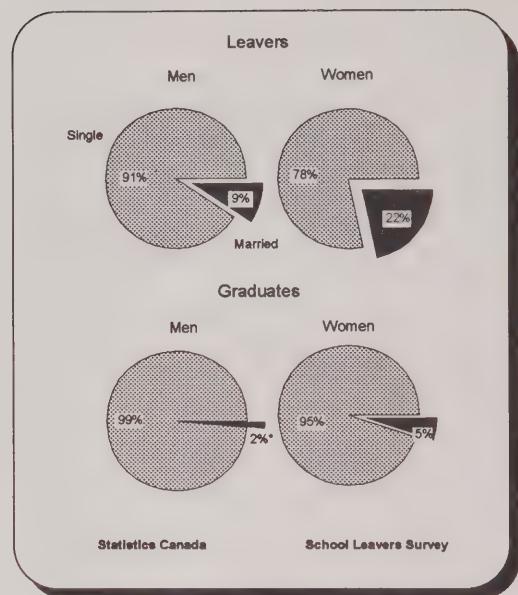


The influence of family structure on school leaving differed for men and women. Women from two-parent or lone-parent families had substantially lower leaver rates than did their male counterparts. By contrast, the leaver rate for women in no-parent families was virtually the same as that for men in similar circumstances, and far exceeded the rates for women in other family situations (Chart 3-2). This high leaver rate for women in no-parent families may reflect the presence of dependent children. In fact, close to a third (29%) of women from no-parent families had children, compared with 8%\* of women from lone-parent families, and 4% of those from two-parent families.

**Chart 3-2**  
Leaver rates by family structure and gender



**Chart 3-3**  
Marital status



### MARRIAGE AND DEPENDENT CHILDREN

Both marital status and dependent children have a dramatic effect on school leaving, especially among women. Household responsibilities, notably child care, are not conducive to the completion of high school studies. Not surprisingly, leavers were much more likely than graduates to be married or to have dependent children.<sup>2</sup>

In 1991, 22% of female leavers were or had been married, compared with just 5% of female graduates (Chart 3-3). The corresponding proportions were lower among men, but the discrepancy persisted: 9% of male leavers, but only 2% of male graduates, were or had been married.

Similarly, much higher proportions of leavers than graduates had dependent children. While more than a quarter (27%) of female leavers had dependent children, this was the case for only

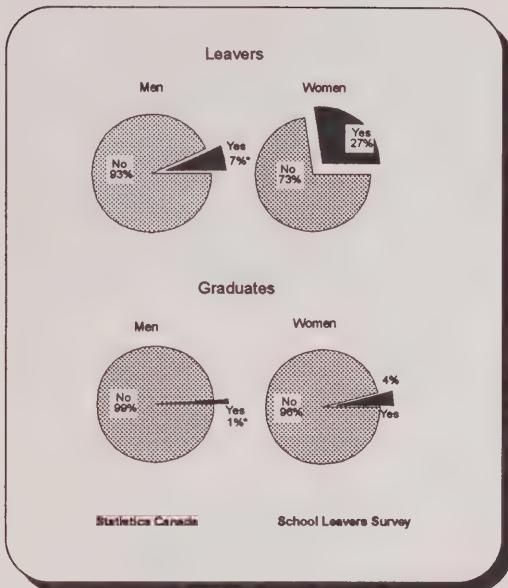
4% of their graduate counterparts. Far fewer men than women had children, but again, there was a difference between leavers and graduates: 7% of male leavers versus a negligible 1% of male graduates (Chart 3-4).

### PARENTS' ATTITUDES AND SOCIO-ECONOMIC BACKGROUND

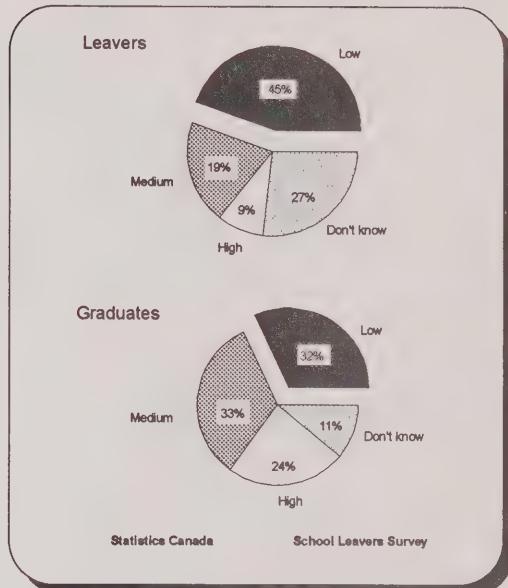
The attitudes toward schooling, levels of education, and occupations of their parents are all associated with the likelihood that students will leave school before graduation.

According to SLS respondents, the vast majority (93%) of all parents considered high school completion to be "very important." Nonetheless, the small minority who did not value high school completion seemed to have a considerable influence on their children's educational decisions. Almost half (49%) of students who said their parents did not consider high school completion very important, were leavers. On the other hand, just 14% of those who said their

**Chart 3-4**  
Dependent children



**Chart 3-5**  
Parental education



parents valued high school completion, had left before graduation.

The parents' own education was also related to the proportions of 18-20-year-olds who were leavers or graduates. Leavers were more likely than graduates to have parents with relatively little formal education (Chart 3-5). For instance, 45% of leavers, compared with 32% of graduates had parents with a "low" level of educational attainment.<sup>3</sup> On the other hand, just 9% of leavers but 24% of graduates had parents with "high" attainment.

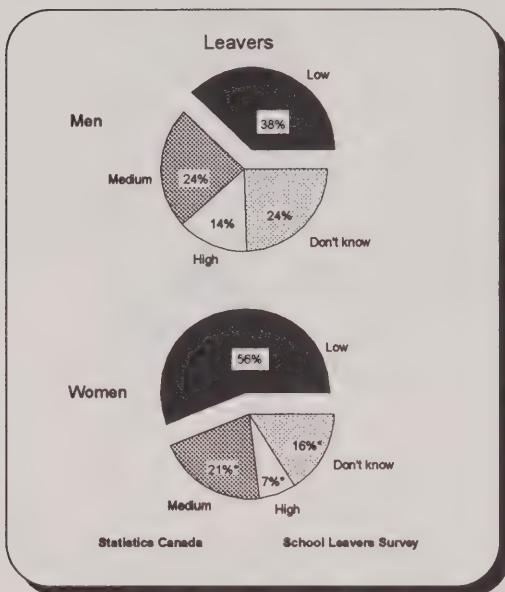
As well, the percentage of leavers who did not know their parents' level of education was double that for graduates (27% versus 11%). This may indicate a lack of strong family ties or little interest in education as a topic for discussion in the home.

Parental education, particularly that of mothers, seemed to have a greater impact on women than on men. In two-parent families, there were eight times as many female leavers whose mothers had

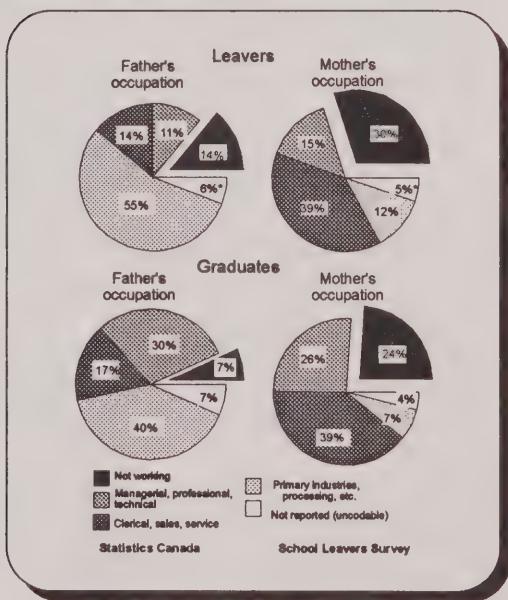
low education as had high education; by contrast, among male leavers, low-education mothers were three times as numerous as those with high education (Chart 3-6). In fact, 56% of female leavers in 2-parent families had mothers who had not graduated from high school, compared with 38% of male leavers.

As might be expected, considering the differences in parental educational attainment, the occupations of leavers' and graduates' parents also varied. Leavers were much more likely than graduates to have parents employed in blue collar fields (primary industries, processing, etc.). For instance, 55% of leavers from two-parent families had fathers who worked in these occupations; this compared with 40% of graduates (Chart 3-7). On the other hand, just 11% of leavers had fathers with managerial, professional or technical jobs, compared with 30% of graduates. The trend was similar in lone-parent families, but because the majority of these families are headed by women, relatively few parents had blue collar jobs.

**Chart 3-6**  
Mother's education, two parent families

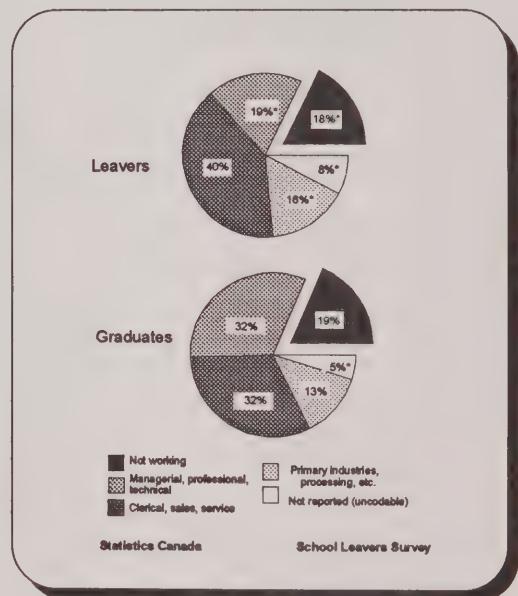


**Chart 3-7**  
Parental jobs in two-parent families



A substantial share of leavers from two-parent families had parents who were not working. The fathers of 14% of leavers were not employed, double the figure for graduates' fathers (7%). Mothers were much less likely to be employed outside the home, but again, the proportion of leavers' mothers who were not employed (30%) exceeded the proportion for graduates (24%). This discrepancy did not prevail among lone-parent families (Chart 3-8). Almost equal shares of leavers and graduates from such families had parents who were not employed -- 18%\* and 19%, respectively.

**Chart 3-8**  
Parental jobs in single parent families



## GEOGRAPHIC LOCALE

People from rural areas are somewhat more likely than city dwellers to be school leavers. Rural residents accounted for 27% of leavers, compared with 23% of graduates. Moreover, rural leavers tended to have left school relatively early. While 42% of rural leavers had departed before completing Grade 10, the figure for urban leavers was 29%.

## ACTIVITY LIMITATION

A small share of 18-20-year-olds -- 6% -- were limited in the kind or amount of activity they could do because of a long-term physical condition or health problem. However, people with disabilities were more likely than those without disabilities to be school leavers. Physically disabled youths spoke of feeling alienated and having a difficult time in school. One participant in the pre-survey focus groups reported that other students were uncomfortable around her and afraid of her.<sup>4</sup>

## ABORIGINAL PEOPLE

School leaver rates were particularly high among aboriginal people. Fully 40% of aboriginal 18-20-year-olds were leavers (compared with 16% for the population aged 18-20 overall), and just 30%\* were high school graduates (versus 63% for all 18-20-year-olds).

This exceptionally high leaver rate was not surprising, as large proportions of aboriginal people had other characteristics associated with early school leaving. Close to half lived with a lone parent or with neither parent, compared with fewer than a quarter of all 18-20-year-olds. The percentage of aboriginal people with dependent children (16%\*) was four times the figure for the 18-20 age group overall (4%).

## IMMIGRATION AND LANGUAGE

Just 8% of the population aged 18-20 were immigrants, and most of them had been in Canada at least 10 years. Immigrants, however, were less likely than the Canadian-born population to be leavers. Just 11% of 18-20-year-old immigrants were school leavers, compared with 17% of people who had been born in Canada.

Linguistic minorities represented 8% of the 18-20-year-old population (English in Quebec; French in the rest of the country; and all those who most often used a non-official language).

Little difference existed between the leaver rates of minority and majority language groups.

## RELATIVE RISK

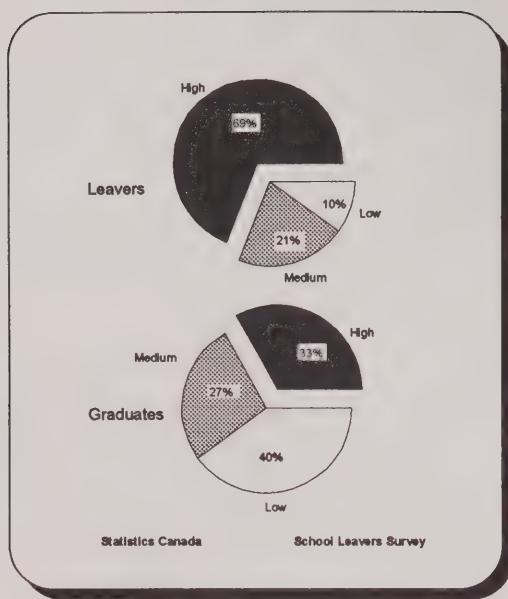
Based on their background characteristics, young adults can be classified into groups with different levels of risk of leaving school before graduation. Several key characteristics, all of which had a significant effect on school-leaving rates, can be used to define high, medium, and low-risk groups: family structure, marital status, dependent children, disability, and parental education and occupation.<sup>5</sup>

The high-risk group is composed of young adults with characteristics associated with high non-completion rates. They tended to come from lone-parent or no-parent families, and were more likely to have their own family responsibilities (i.e., they were married or had dependent children). The high-risk group also contains those from lower socio-economic groups and those who had disabilities.

Four out of ten 18-20-year-olds were in the high-risk group. Their leaver rate, 27%, far exceeded the rate for 18-20-year-olds overall (16%). And not surprisingly, the majority of leavers (69%) came from the high-risk group (Chart 3-9). A high-risk background, however, did not inevitably mean early departure. A third of graduates, in fact, were classified as high-risk.

While background characteristics may identify a student with a greater chance of leaving, many other factors play a role in that student's educational destination: parental attitudes, the school environment, programs to keep young people in school, good teachers, good role models, and individual initiative, determination and motivation. A positive school environment could counter-balance the impact of being from a high risk background.

Chart 3-9  
Risk groups



At the other end of the risk continuum were students whose characteristics were associated with low leaver rates. The low-risk group included those from two-parent families, where both parents had at least graduated from high school. Also included in the low-risk group were students from two-parent families in which the father held a managerial, professional or technical occupation.

As might be expected, leavers were far less likely than graduates to be in low-risk groups. Whereas 40% of graduates had low-risk backgrounds, the percentage among leavers was just 10%.

Young adults whose characteristics did not place them at either end of the risk extremes were classified as medium-risk. This group came from families headed by a well-educated lone parent or from two-parent families where at least one parent had less than high school graduation. The medium-risk group accounted for a slightly lower

proportion of leavers (21%) than graduates (27%).

## SUMMARY

Several background characteristics can help identify students who are likely to leave school before graduating. Above-average leaver rates tended to be associated with those from lone-parent or no-parent families, and from families where parents have low levels of educational attainment or blue collar jobs. Similarly, the chances of early leaving were much greater for those who were married, had children, or had disabilities. As well, leaver rates were particularly high among aboriginal people.

Nonetheless, although background characteristics may identify students with the greatest likelihood of becoming school leavers, a large proportion of the high-risk group does graduate from high school. Obviously, other factors, including the school environment itself, are involved in an individual's decision to either stay in school or to leave before graduation.

## REFERENCES AND NOTES

<sup>1</sup> Respondents in no-parent families were living alone or with their own children, with their spouse or common-law partner, with relatives other than parents or step-parents, or with friends.

<sup>2</sup> The respondents' marital status and dependent children refer to the time of the interview (April to June 1991).

<sup>3</sup> In two-parent families, "low" parental education refers to families where one or both parents had not graduated from high school; "medium," to families where both parents were high school graduates or where one had at least some postsecondary education, and the other had less; and "high," to families where both parents had at least some postsecondary education. In lone-parent families, "low" parental education refers to less than high school graduation; "medium," to high school graduation; and "high," to at least some postsecondary education.

<sup>4</sup> Price Waterhouse. *"Qualitative Research Related to the School Leavers Questionnaire."* Final Report, October 25, 1990.

<sup>5</sup> The high-risk group consists of those in one or more of the following categories: with dependent children; ever-married; with disabilities; living with neither parent; lone-parent families where the parent had less than postsecondary education; two-parent families where the father was not working and the mother either was not working or had a pink or blue collar job; two-parent families where both parents were blue collar workers; or two-parent families where the father's education was unknown. All these groups had leaver rates of at least 20%.



## 4. The school experience

### INTRODUCTION

Schools obviously have no control over some of the factors that may be related to early withdrawal such as family structure and socio-economic status. However, education practices and policies can be changed if elements in the school environment contribute to students leaving before they graduate. And in fact, there are striking differences in the school experiences of leavers and graduates, ranging from their ability to get along with teachers, to interest in and attendance at classes, participation in school activities, friendship networks, and a sense of belonging. The two groups tend to have different perceptions of and reactions to the school environment.

### WHY DID THEY LEAVE?

Leavers' reasons for withdrawing clearly indicate that school experiences influenced their decision. School-related factors were cited as the most important reason for quitting by 41% of the female and 40% of the male leavers (Chart 4-1). These factors include boredom, problems with school work and teachers, and skipping classes.

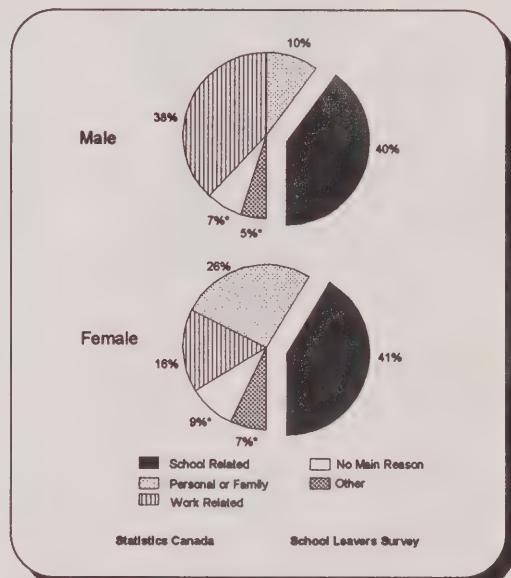
Work-related considerations more frequently influenced male leavers, while personal or family reasons were cited more often by women (Chart 4-1). Work-related reasons for leaving include preferring work to school and having to work/financial reasons. Personal or family motivations refer to pregnancy/marriage, drug and alcohol problems, problems at home, and sickness/medical conditions.

### THE SCHOOL SYSTEM

A better understanding of school-leaving can be gained from knowledge of the differences between leavers' and graduates' school

Chart 4-1

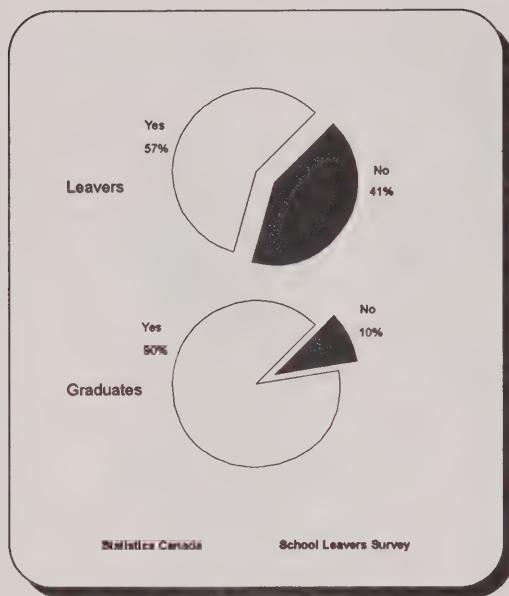
Most important reasons for leaving by category



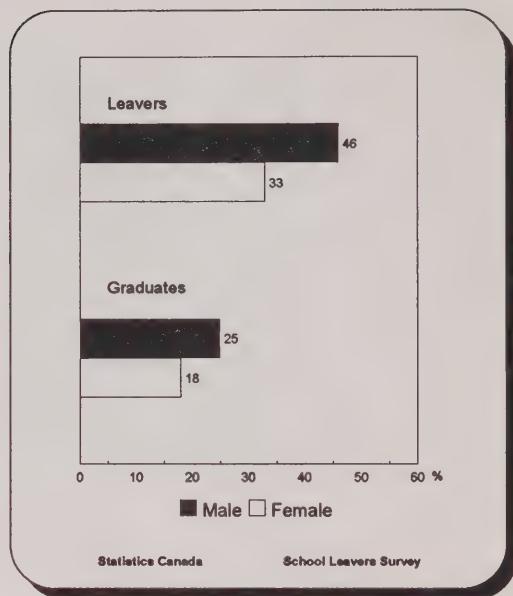
experiences. These experiences include enjoyment and interest in classes, contact with teachers, reactions to school regulations, participation in school activities, and peer relationships.

A much higher proportion of leavers than graduates (41% compared with 10%) said that overall, they did not enjoy school (Chart 4-2). Not surprisingly, leavers expressed more dissatisfaction with various aspects of their program than did graduates (Chart 4-3). Leavers were more likely to feel that their classes were not interesting (41% compared with 21%); this was especially the case for male leavers, nearly half (46%) of whom were not interested in their classes (Chart 4-4). And while the majority of all students felt that they got along with most of their teachers, over seven times as many leavers (15%) as graduates (2%) reported that they did not (Chart 4-5).

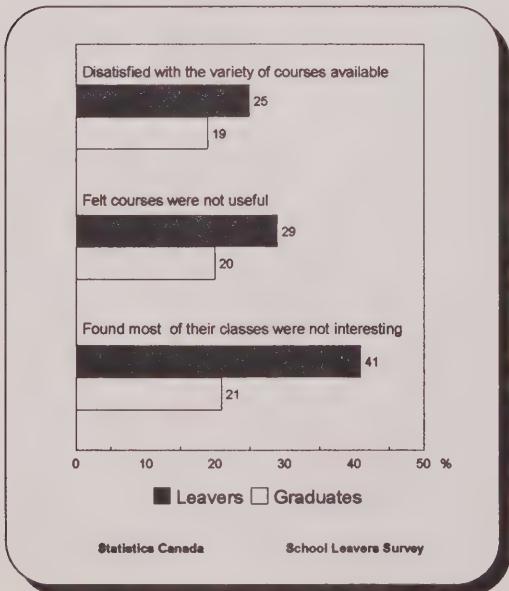
**Chart 4-2**  
Overall, did you enjoy school?



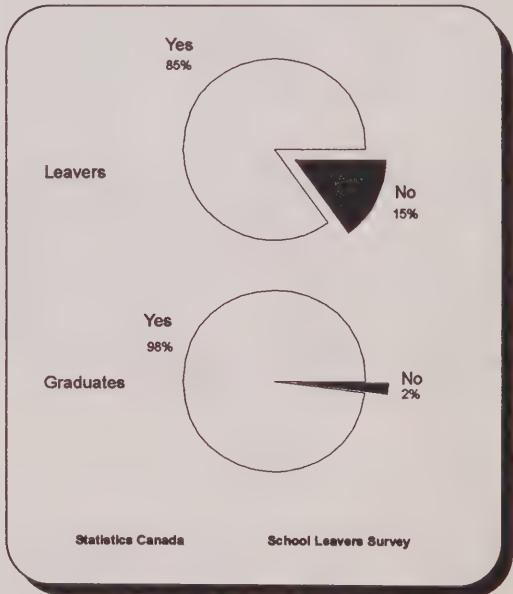
**Chart 4-4**  
Percent who found most classes were not interesting



**Chart 4-3**  
Dissatisfaction with course variety, usefulness and interest



**Chart 4-5**  
Did you get along with most of your teachers?



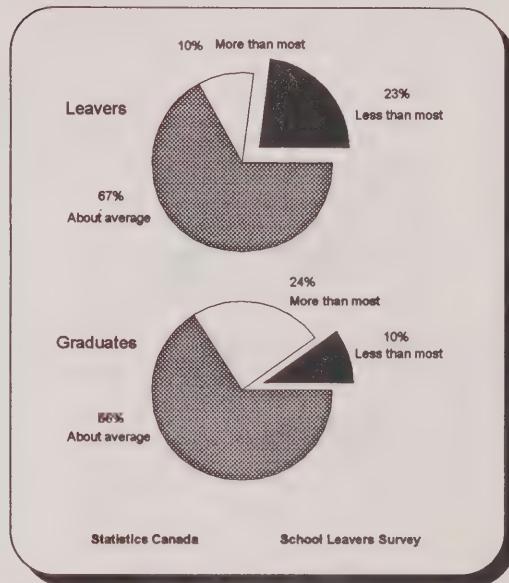
As well, a higher proportion of leavers than graduates were dissatisfied with school regulations (Chart 4-6). About 21% of the leavers felt that the rules were too strict, compared with 15% of the graduates. On the other hand, 12% of the leavers, but just 7% of the graduates, considered school rules too lax. The difference between leavers and graduates was particularly pronounced among men: 36% of male leavers, compared with 22% of male graduates were dissatisfied with school rules.

**Chart 4-6**  
Dissatisfaction with school rules (total % too loose/too strict)



Leavers' involvement at school, either in class or in extracurricular activities, was considerably less than that of graduates. The proportion of leavers who felt that they had participated in class less than most other students was more than double the proportion of graduates (23% compared with 10%) (Chart 4-7). Conversely, graduates were more likely than leavers to report above-average class participation (24% versus 10%).

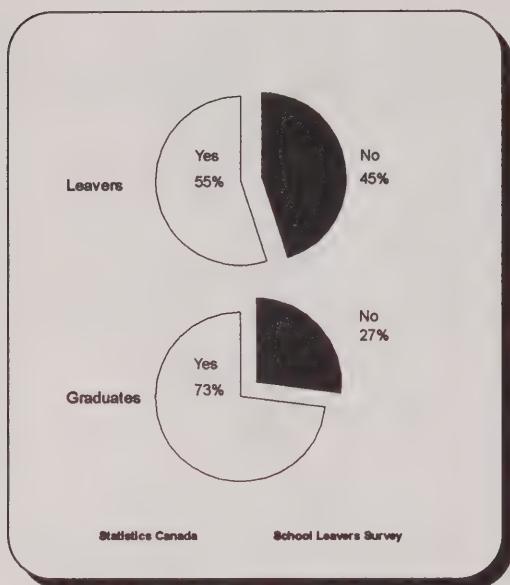
**Chart 4-7**  
Do you think that you participated in class?



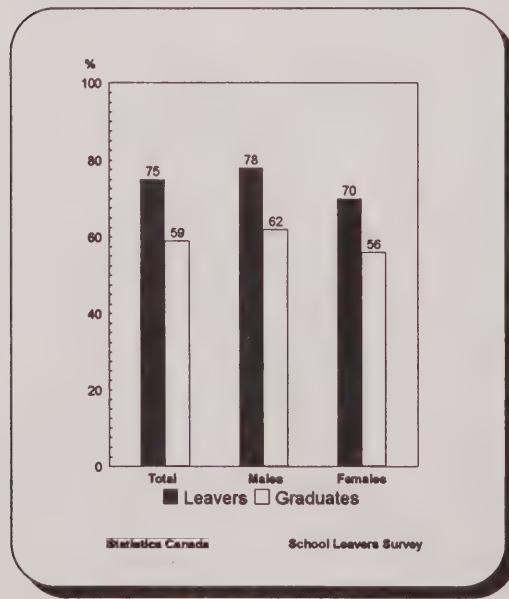
More than nine out of ten leavers and graduates said that extracurricular activities were offered at their school. But despite the availability of such activities, 45% of the leavers, compared with 27% of the graduates, did not participate in any of them (Chart 4-8).

Not unexpectedly, in light of leavers' dissatisfaction with school and lack of involvement in school activities, they were more likely than graduates to skip classes during their last year of school. Skipping class was not unusual, with the proportion of leavers who had skipped class (75%) considerably above the figure for graduates (59%). The practice was particularly common among male leavers (78%), although female leavers were also more likely than their graduate counterparts to skip classes (70% versus 56%) (Chart 4-9). As well, skipping class tended to accelerate in the last year of school. Fully 64% of leavers who admitted that they had skipped classes reported that they did so more often in their last year of school; this compared with 54% for graduates.

**Chart 4-8**  
Did you participate in any extracurricular activities?



**Chart 4-9**  
Did you skip classes?  
( % Yes)



## FRIENDSHIPS

School life consists of more than classes, teachers, and school activities. Friendships can be an important part of the experience, for both social and academic reasons. Friends can exert a "push" or "pull" by encouraging each other to remain in school or by being a force that pulls students away from school.

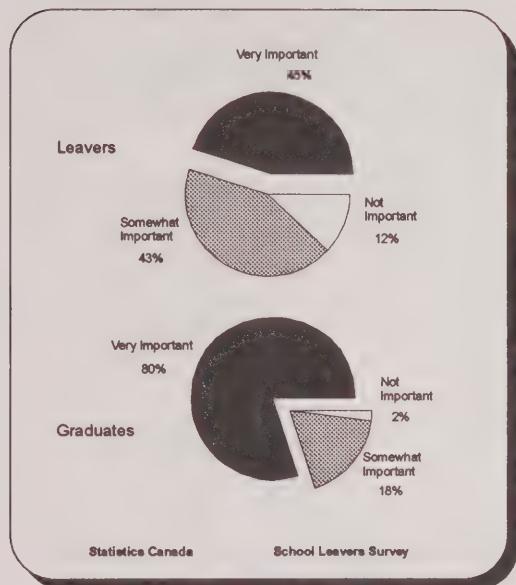
Overall, there was little difference between leavers and graduates in terms of having close friends at the same school (more than 90% for both groups). The exception was female leavers who were somewhat less likely than female graduates to have close friends at their school.

The story was different for friendships outside school. Over 70% of the male leavers had close friends not attending any school, compared with 45% of male graduates. The difference was less marked among women: 59% versus 41%.

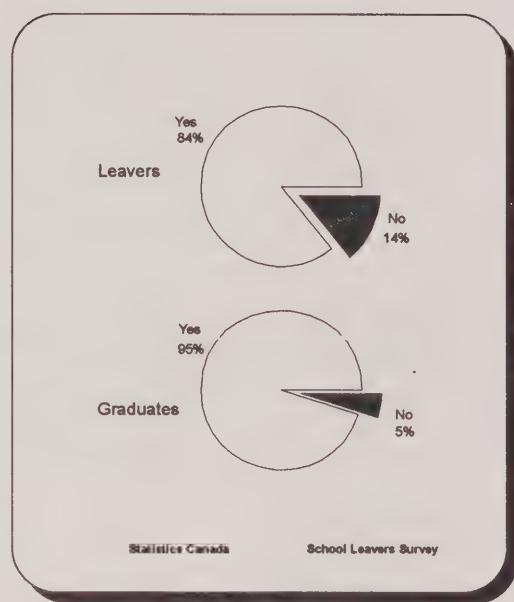
The School Leavers Survey did not directly address the effects of friendships on school departure decisions. However, the Survey did ask respondents to indicate the importance their friends attached to high school completion. Most graduates had friends who strongly supported high school completion, while the friends of leavers were less clearly convinced of the value of a high school diploma.

Fewer than half of the leavers, compared with 80% of the graduates, reported that most of their friends believed completing high school was "very important" (Chart 4-10). Conversely, about 12% of the leavers said that their friends felt that it was not very important to finish high school, whereas this was the case for only 2% of the graduates.

**Chart 4-10**  
Did most of your friends think that completing high school was:



**Chart 4-11**  
Did you "fit in" at school?



## FITTING IN

Fitting in at school implies a sense of belonging, a feeling of acceptance, and some sort of identification with the school. This feeling can come from a variety of sources such as the school environment, teachers and peers. And despite the relatively large proportions of leavers who, by a number of measures, were having difficulty with the school system, the majority felt that they "fit in." Nonetheless, a significantly higher percentage of leavers than graduates said they did not fit in (14% compared with 5%) (Chart 4-11).

## DIFFERENT REASONS ... DIFFERENT EXPERIENCES

As noted earlier, among both men and women, school-related factors were the leading reason for leaving. However, sizable proportions of leavers

pointed to work-related or personal/family reasons (Chart 4-1). Does this mean that those whose motivation for withdrawing was work-related or family/personal had more positive school experiences than those who left primarily for school-related reasons?

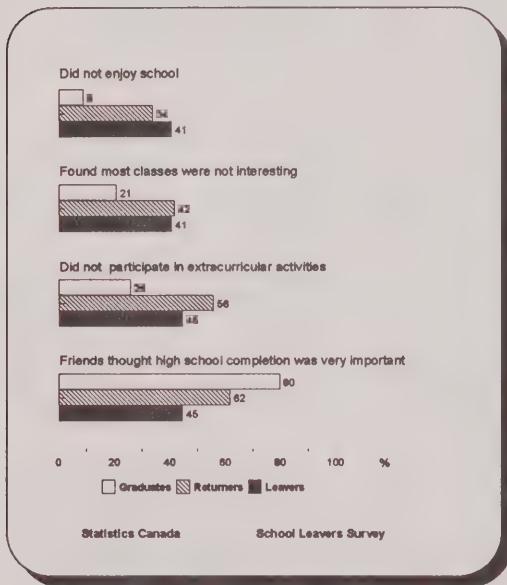
Indeed, leavers who cited school-related factors were more likely than those with the other motivations to not enjoy school (53% compared with 36% and 24%). Similarly, finding classes uninteresting was more prevalent among leavers who cited school-related factors than among those who left for the other reasons (50% compared with 39% and 30%).

## GOING BACK

About 3% of the graduates identified in the School Leavers Survey were "returners" in that they had dropped out of high school and later returned to complete their studies. The school experiences of these graduates differed from

those of graduates who never dropped out, often more closely resembling the experiences of leavers. In fact, with regard to enjoyment of school, interest in classes, and participation in extracurricular activities, returners had more in common with leavers than they did with graduates who never left (Chart 4-12). However, returners were considerably more likely than leavers to have friends who thought high school completion was "very important." As well, over 70% of returners cited recognition of the value of education as a reason for returning.

**Chart 4-12**  
School experiences of graduates who never left, returners, and leavers

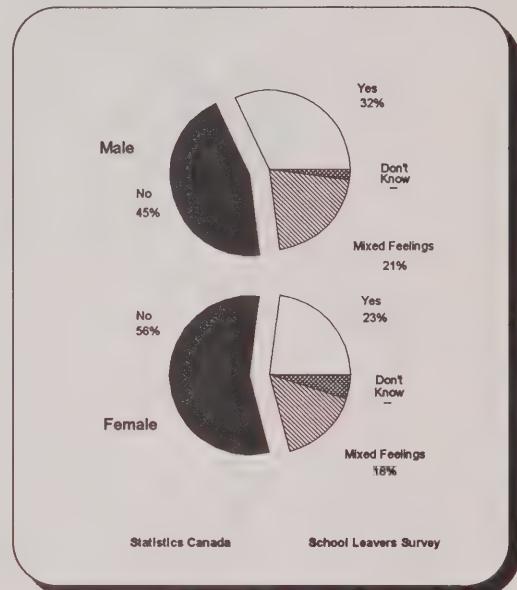


In addition, about 9% of the graduates had considered leaving school but did not. What kept them there? Realizing the value of education and parents/friends talking them into staying were the reasons most frequently given for staying (60% and 31%, respectively).

## ANY REGRETS?

Close to half of all leavers were not happy with their decision to withdraw from school. A smaller proportion of leavers -- 29% -- were glad that they had left, while 19% had mixed feelings. Men were somewhat more likely than women to be happy about leaving: 32% versus 23% (Chart 4-13).

**Chart 4-13**  
Are you glad you left?

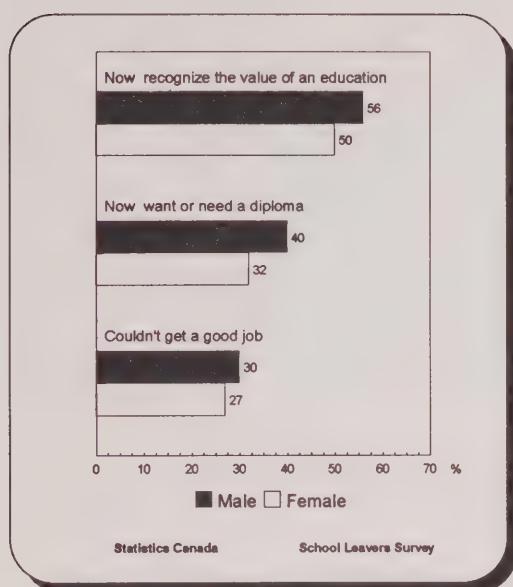


The reason most frequently given by those who regretted leaving school was that they now recognize the value of an education. Wanting or needing a diploma and not being able to get a good job ranked next as reasons for wishing they had not withdrawn (Chart 4-14).

On the other hand, liking work/earning money and dislike of or boredom with school were the reasons most frequently mentioned by leavers who were happy they had left. About half the leavers who were glad they had withdrawn indicated that they preferred working and earning money, while around a quarter cited dislike for or boredom with school.

### Chart 4-14

#### Why are you sorry you left?



### SUMMARY

Leavers' school experiences tended to be less positive than those of graduates. Indeed, school-related factors were the major reason reported by leavers for withdrawing. On the other hand, recognizing the value of education ranked first as a reason for returning to school, for staying in school, and for being sorry about dropping out.

Thus, many leavers are aware of the value of a high school education, although they have difficulty with the ways in which it must be obtained. Better knowledge of how students interact with the school environment should increase understanding of the practices and policies that could be implemented to encourage students to remain in school until graduation.



## 5. Academic performance

### INTRODUCTION

Academic performance is a key variable in the school leaving process. According to several measures of academic performance, leavers fell behind graduates. Leavers tended to have lower grade averages than did graduates. Leavers were also more likely to have difficulty with, or even fail, core courses. A higher proportion of leavers than graduates had failed an elementary grade. Many students who left, however, did so although they had achieved quite respectable school grades.

### SECONDARY SCHOOL GRADE AVERAGES<sup>1</sup>

As might be anticipated, graduates outperformed leavers. Only 5%\* of the leavers reported that their grades were mainly As compared with 30% of the graduates, and similarly, 32% of the leavers and 47% of the graduates reported receiving mainly B grades. Conversely, 40% of the leavers achieved mainly Cs, compared with 19% of the graduates, and 13% compared with only 1%\* of graduates received mainly Ds or Fs. (For a rather large percentage of the leavers (10%) grade averages were unknown) (Chart 5-1).

Yet, as their grade averages indicate, the majority of leavers were performing satisfactorily. In fact, 37% of them had A or B averages, and 40% were getting by with Cs. This is consistent with the fact that few leavers (just 8%) cited problems with school work as their primary reason for leaving school. Moreover, 49% of those who gave personal or family-related reasons for leaving, achieved mainly As or Bs (Chart 5-2). Clearly, much more than "low achievement = school departure" is involved.

Chart 5-1  
Grade averages before leaving school

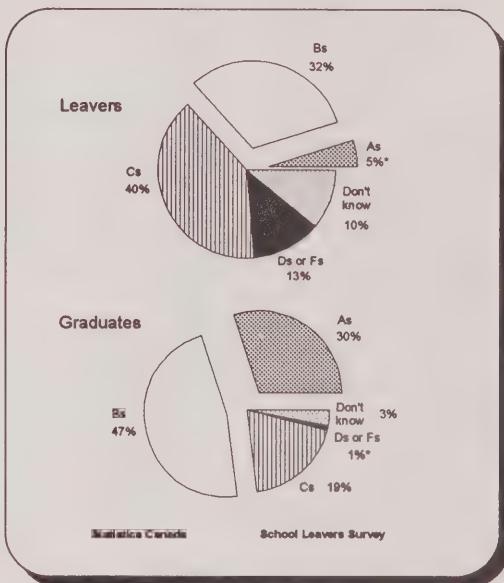
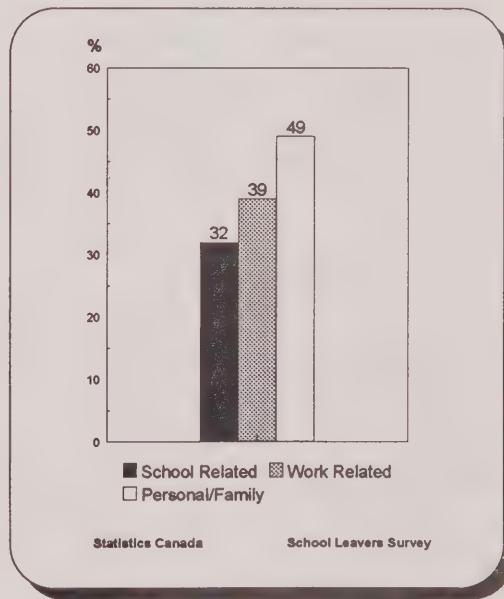


Chart 5-2  
Leavers with A or B grade averages by most important reason for leaving school



## COURSE DIFFICULTIES<sup>2</sup>

Grade averages indicate how students are evaluated by the school system, but they do not necessarily indicate how difficult students find their classes. Were leavers more likely than graduates to find their courses difficult?

Mathematics, science, and English/French are typically core subjects in an academic program, although students often have some choice in the courses that they take. Nonetheless, the overwhelming majority of graduates and leavers said that they had taken mathematics and English/French. Only 9% of the leavers and 2% of the graduates did not take science.

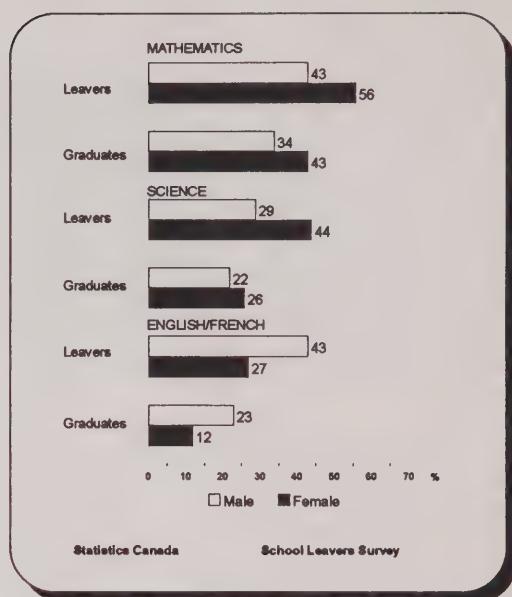
Regardless of gender, a higher percentage of leavers than graduates said they experienced difficulties in all three courses. The most pronounced difference was in English/French, where the proportion of leavers who had difficulties was more than double that of graduates.

For both groups, however, women were more likely than men to find mathematics and science difficult, while English/French produced more difficulties for men than for women (Chart 5-3). Mathematics was found to be difficult by 56% of women leavers compared with 43% of women graduates; for men the difference was less pronounced. Female leavers were much more likely than female graduates to report difficulties in science (44% versus 26%), while the difference between male leavers and graduates was much less pronounced (29% versus 22%) (Chart 5-3).

## COURSE FAILURE

Students may struggle with courses, but they do not necessarily fail them. The difficulties experienced by the leavers, however, were particularly serious. In all three core subjects, over 60% of the leavers who said they had difficulties had failed that subject at some point during high school.

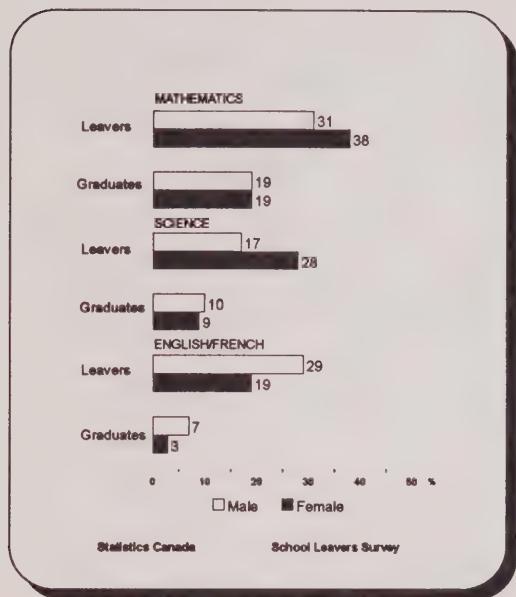
Chart 5-3  
Percent who had difficulties in core courses



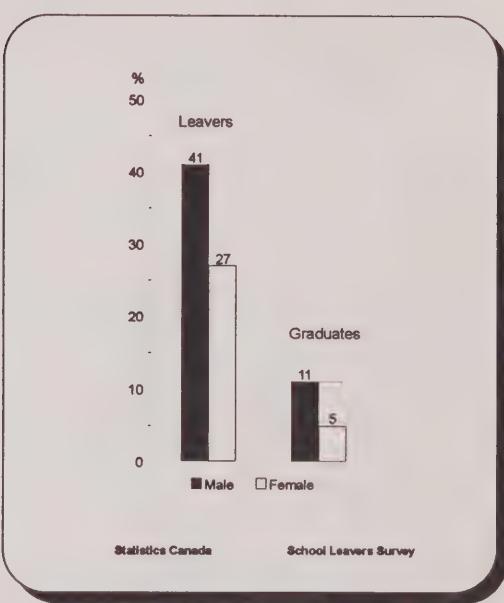
Whether male or female, leavers had higher failure rates than the graduates in each of the three courses, and the differences were more pronounced than those concerning course difficulties. Again, the difference between the two groups was most apparent in English/French which 29% of male leavers and 19% of female leavers had failed, compared with only 7% and 3% of graduates. In science, the difference between leavers and graduates was especially pronounced among women: 28% compared with 9% had failed (Chart 5-4).

The gender patterns that emerged for course failures were somewhat different than those for course difficulties. Female leavers had a higher failure rate in science than did male leavers, but there was little or no difference between female and male graduates. For both graduates and leavers, the failure rate in English/French was higher for men than for women (Chart 5-4).

**Chart 5-4**  
Percent who failed core courses



**Chart 5-5**  
Percent who failed a grade in elementary school



## ELEMENTARY FAILURE

Academic difficulties may begin early in a student's school career. Differences in the academic achievement of leavers and graduates have been noted as early as Grade 3.<sup>3</sup> In fact, a much higher proportion of leavers than graduates had failed an elementary grade. Overall, 36% of the leavers had failed a grade, compared with 8% of the graduates.

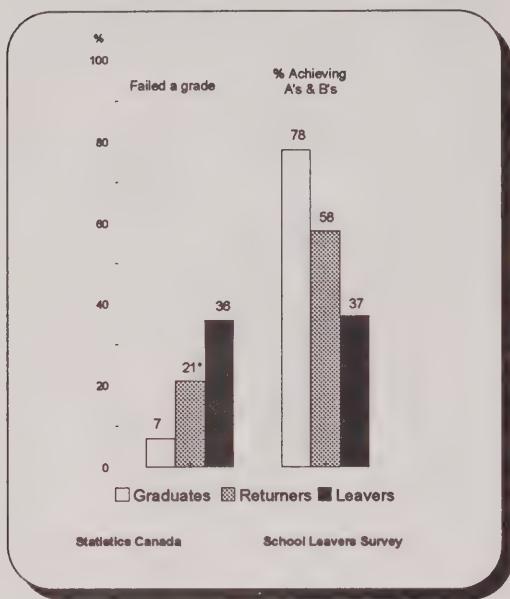
Among both groups, men were more likely than women to have failed a grade. However, more than five times the proportion of female leavers than graduates had failed (27% compared with 5%). Among men, the proportion of leavers who had failed was almost four times the proportion of graduates: 41% compared with 11% (Chart 5-5).

## RETURNERS

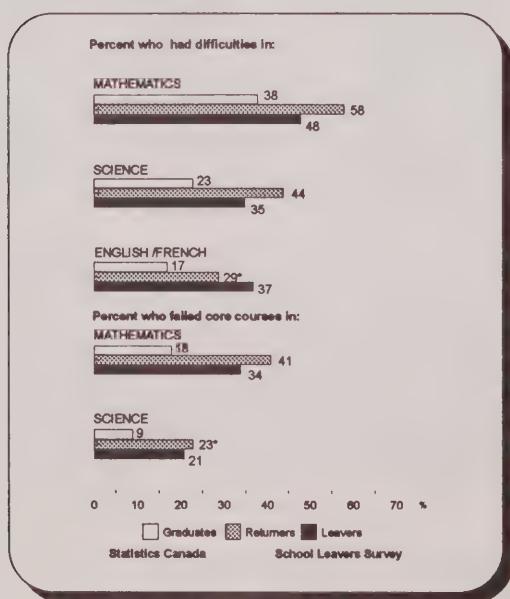
Graduates who never dropped out of school had different school experiences than did returners, that is, graduates who dropped out and returned to complete their high school education (see chapter 4). These returners were a small group, constituting about 3% of all graduates. Did their academic performance differ from that of other students?

Returners were more likely than graduates who never dropped out to report that they had failed an elementary grade, that they had difficulties in the core subjects, and that they had failed these subjects at some point in high school (Charts 5-6 & 5-7). Fewer returners than graduates reported receiving mainly A and B grades (Chart 5-6).

**Chart 5-6**  
Percent who failed an elementary grade and  
% achieving A&B high school averages



**Chart 5-7**  
Percent who had difficulties in or failed core courses, by subject



Despite negative school experiences and difficulty with academic subjects, students do still graduate from high school. This fact raises some important questions, particularly why some students stay or return to graduate despite early failure, lower high school grades, difficulties and failures in core courses?

## SCHOOL EXPERIENCES AND ACADEMIC PERFORMANCE

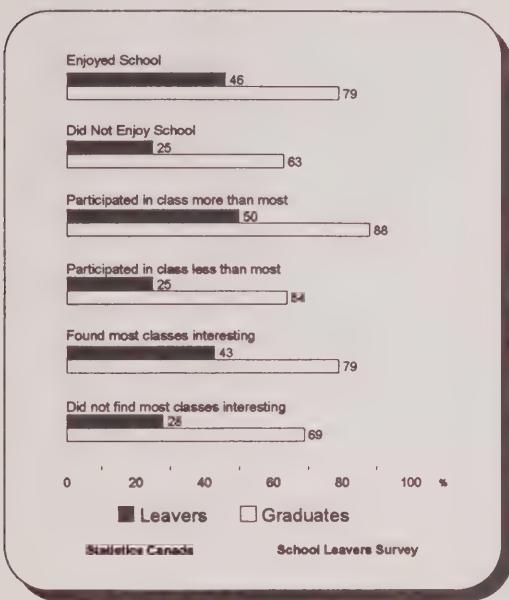
While a variety of factors, such as family support and type of school may be associated with academic performance, students' experiences in the school environment are also related to grades. Students who had positive experiences were more likely than those who had negative experiences to achieve high grades. This relationship, however, is likely to be reciprocal. For example, achieving good grades may influence students' evaluation of the school system and their evaluation of the school system may affect their academic performance. This section examines enjoyment of school, interest in classes, class participation and the grade averages of leavers and graduates.

Both leavers and graduates who enjoyed school were more likely than those who did not enjoy school to have A or B averages (Chart 5-8). Similarly, those who generally participated in class more than other students and who found their courses interesting, had higher grade averages (Chart 5-8).

There is an obvious relationship between grade averages and school experiences. Yet, even when these experiences were taken into account, graduates achieved higher grades than the leavers. It appears that graduates are able to achieve good grades whether or not they enjoy school, participate in class or find classes interesting. On the other hand, these factors make a great deal of difference for the leavers.

### Chart 5-8

#### Percent achieving A or B averages by enjoyment, participation and interest



### SUMMARY

On each measure of academic performance (elementary failure, grades achieved, course difficulty and course failure), a larger proportion of leavers than graduates reported problems. At the same time, however, most leavers achieved the grades necessary to continue with their studies. For the most part, leavers were not failing academically, but one can ask if there are structures and processes within the system which do not produce successful outcomes?

Although academic performance is seen as a key variable in the school leaving process and differences in the performance of graduates and leavers have been found, much more needs to be discovered about the factors involved in, and consequences of, academic performance. What conditions, circumstances and activities produce successful school performance (i.e. what works and what doesn't)? Does poor academic performance lead to reduced levels of self-esteem? Do unsuccessful results discourage students from becoming involved in their schooling?

## REFERENCES AND NOTES

<sup>1</sup> Leavers who had finished at least one year of secondary school (about 92% of all leavers) and all graduates were asked to estimate their grade average in the last full term before they left school.

Only respondents who had completed Grade 8 or more in Quebec or British Columbia and Grade 9 or more in the other provinces were asked to report grade averages in high school, course difficulties, and course failure in high school.

The grade averages refer to those the students achieved in their last full term before leaving school. Thus, the reported averages do not refer to the same grade, to the same academic year for all individuals. Although these averages are self-reported, independent evidence suggests that they correlate highly with school-reported grades.

<sup>2</sup> Leavers who had finished at least one year of secondary school and all graduates were asked if they had difficulties with mathematics, science, or English/French while in high school. English-speaking respondents were asked about difficulties in English; French-speaking respondents, about difficulties in French. Comparisons are based on students who had taken the courses in question.

<sup>3</sup> See: Byron L. Barrington and Bryan Hendricks, *"Differentiating characteristics of high school graduates, dropouts and non-graduates."* *Journal of Educational Research* 82 (6) 1989.

## 6. Part-time employment during the school term

### INTRODUCTION

Since the 1970s, educators and analysts have been concerned about the transition from school to work, and the relevance of the school curriculum for employment. Part-time work was once considered a positive experience for students since it provided valuable job exposure and eased the entry into the labour force. Students with part-time jobs were commended for their initiative and industrious behaviour.

In fact, there has been a substantial increase in the proportion of high school students who hold part-time jobs during the school term. In 1976, 37% of high school students aged 17-19 were employed (monthly average). By 1991, this rate had risen to almost 50% and an even greater proportion, about two-thirds, worked at some time during the school year.

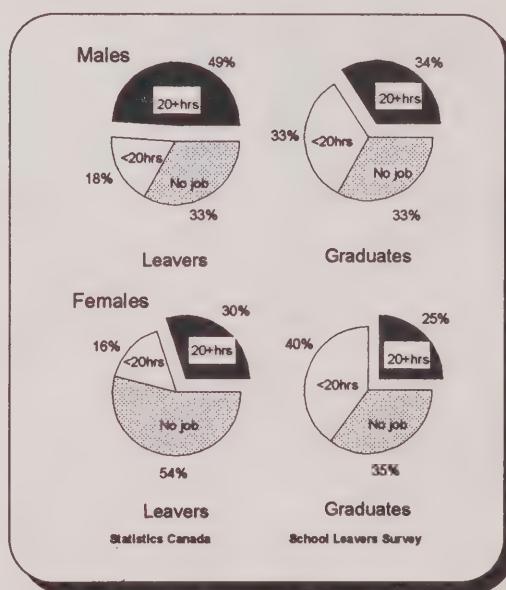
In recent years, educators have become concerned that having a part-time job may detract from academic success, in particular, it may increase the likelihood of leaving school before a certificate or diploma is earned. Research results have been contradictory. One study found that hours worked during the school year were an important predictor of dropping out, with the risk of non-completion increasing as hours of work increased.<sup>1</sup> However, an earlier study found that students who worked less than twenty hours per week were more likely to remain in school than students who were not employed.<sup>2</sup>

### PART-TIME WORK DURING THE SCHOOL YEAR

A majority of all students in the SLS held jobs during their final year of school, with employment slightly more common among graduates (66%) than school leavers (59%). This overall distribution, however, masks marked differences in the relationship between employment and school outcomes by gender and the amount of time worked.

Male leavers were much more likely than graduates to have worked twenty or more hours per week and half as likely to have worked less than twenty hours (Chart 6-1). Female leavers were only slightly more likely than graduates to have worked twenty hours or more per week but were much less likely to have jobs with moderate time demands, 16% compared with 40%. Unlike males, many more female leavers than graduates (54% versus 35%) had no job at all (Chart 6-1).

**Chart 6-1**  
Part-time employment of leavers and graduates by gender

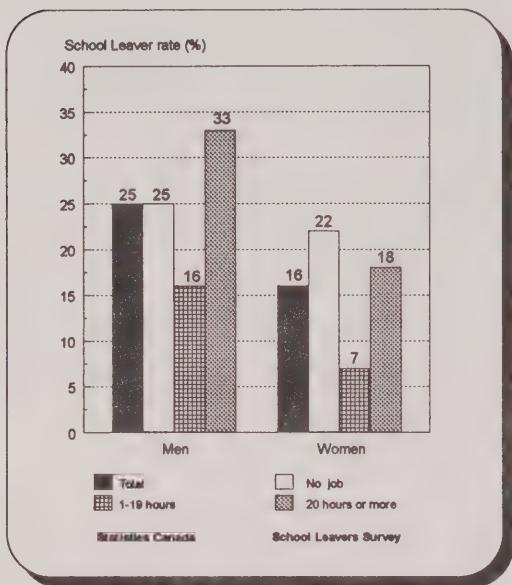


### WORK INVOLVEMENT AND SCHOOL LEAVING<sup>3</sup>

The likelihood of high school non-completion appears to be influenced by the number of hours a student works. For both males and females, working moderate hours (less than 20 hours per week) was associated with the lowest school leaver rates. The effect of working many hours (20 or more hours per week), however, varied for males and females. Men who worked long hours had a higher leaver rate than men not working at

all (33% versus 25%) whereas women working long hours had a somewhat lower rate than women not working (18% versus 22%). (Chart 6-2).

**Chart 6-2**  
School leaver rates of 18-20-year-olds, by number of hours worked and gender



## WORK INVOLVEMENT, SCHOOL EXPERIENCES, ACADEMIC PERFORMANCE AND SCHOOL LEAVING

Academic performance, school experiences and school completion all appear to be closely related. Leavers were less likely than graduates to have had an A or B average in their final high school term (see Chapter 5). Leavers were far more likely than graduates to have had negative school experiences such as a lack of enjoyment or interest (see Chapter 4). Given the complex set of factors involved in determining the likelihood of non-completion, questions arise about the effect of work on the risk of school leaving.

For example, the lower risk of school-leaving associated with moderate work involvement among both men and women may indicate that a self-selection process is operating. That is,

students who perform well academically, have positive school experiences, and participate in classroom and extracurricular activities may also have the extra energy for a job, and the motivation to keep part-time hours manageable. In contrast, students with lower school performance and negative school experiences may lack the necessary skills or the interest in employment, or may take on jobs with extensive time commitments as they begin to disengage from school in favour of work.

From Table 6-1 it would appear that a relationship exists between work involvement, school experiences and academic performance. Working moderate hours tended to be associated with positive school experiences and academic success. Given the apparent relationship between work involvement and school experiences and performance, the latter were held constant to determine whether or not working during the school term had any independent impact on school-leaving.

The reduced risk of dropping out associated with moderate part-time hours is not completely due to the larger proportions of motivated and successful students attracted to this kind of employment. When the effects of school experience and performance were removed, short hours were still associated with the lowest school-leaving rates for both men and women. Generally, the highest leaver rates for men were among those who worked long hours, while not having any job during the school year was associated with the highest leaver rates for women (Table 6-2).

## SUMMARY

It appears that part-time employment involving a moderate number of hours per week during the school year may promote behaviours and attitudes that lead to perseverance in school, regardless of students' academic performance levels and school experiences. Limited work involvement may serve to increase a student's self-esteem, and foster success-oriented behaviours such as punctuality, initiative, and hard work. In addition, most working students have low-level, low-paying jobs that hold little promise of future, full-time employment at a

Table 6-1 Percent of students with positive school experience or high performance, by work status and gender

Experiences	MALES			FEMALES		
	No job %	short hours %	long hours %	No job %	short hours %	long hours %
A or B average	69	76	58	78	84	74
Enjoyed school	80	86	78	85	93	80
Found classes interesting	70	73	67	79	83	76
Participated in class as much or more than others	86	89	85	88	91	87
Participated in extra-curricular activities	69	78	71	67	71	62

Table 6-2 School leaver rates associated with work status and selected characteristics, by gender

Selected characteristics	MALES			FEMALES		
	No job	short hours	long hours	No job	short hours	long hours
Enjoyed school % Yes	16	10*	25	16	6*	13
Found courses interesting % Yes	20	12	25	19	6*	16
Participated in class % average or greater	21	14	30	19	6*	16
Participated in extra-curricular activities % Yes	15	10	29	15	6*	15
School grades % A/B	11	7*	21	9	--	12*

decent income level. This experience may convince many students that high school graduation is a necessary condition to access interesting positions with good earning potential.

It seems likely, however, that intensive work involvement increases the risk of school-leaving for many students, particularly males, either because the balance between the time demands of school and work can no longer be maintained, or because long work hours are indicative of an underlying process of disengagement from school. Long hours may then reinforce the

school-leaving process by providing tangible and immediate psychic and monetary rewards that outweigh the more abstract and long-term benefits of graduation.

## REFERENCES AND NOTES

<sup>1</sup> Herbert W. Marsh. *"Employment during high school: character building or a subversion of academic goals?"*, *Sociology of Education*, Vol. 64, July 1991.

<sup>2</sup> Ronald D'Amico. *"Does employment during school impair academic progress?"*, *Sociology of Education*, Vol. 57, July, 1984.

<sup>3</sup> The leaver rates cited in this chapter are based only on those persons aged 18 to 20 who were not in high school at the time of the survey. Excluded from the calculation were the approximately 241,000 18-to-20-year-olds who were still in high school at the time of the survey (continuers). For further information on this topic see Deborah Sunter, *"School, work, and dropping out"*, *Perspectives on Labour and Income*, Statistics Canada, Catalogue 75-001, Summer 1993.

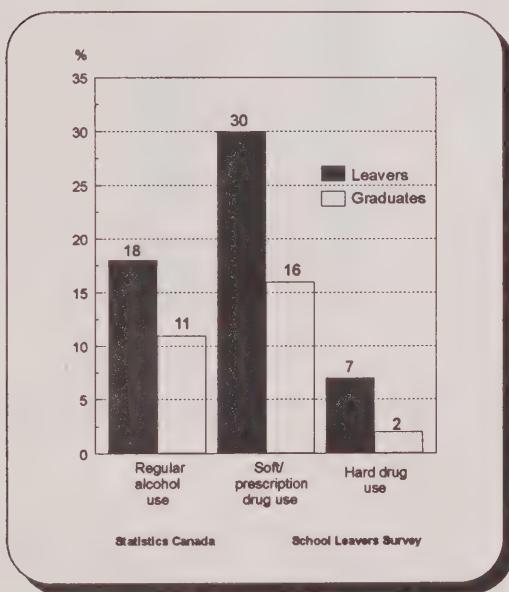
# 7. Patterns of student deviance

## INTRODUCTION

Leavers are more likely than graduates to engage in a number of activities that involve a degree of rebellion or insubordination, and therefore, might be considered deviant. These activities include regular alcohol consumption, soft and hard drug use (Chart 7-1).

Chart 7-1

Alcohol and drug use in last year of school, leavers and graduates



Leavers, whether male or female, generally reported that they had engaged in these practices more frequently and regularly than did their graduate counterparts.

Not surprisingly, since some of this behaviour is beyond the limits of the law and may lead to other illegal activities, leavers also had higher rates of criminal conviction than did graduates.<sup>1</sup> If these deviant behaviours tend to be associated more with leavers than with graduates, are they potential early warning signs of students with an above-average risk of dropping out?

## ALCOHOL CONSUMPTION

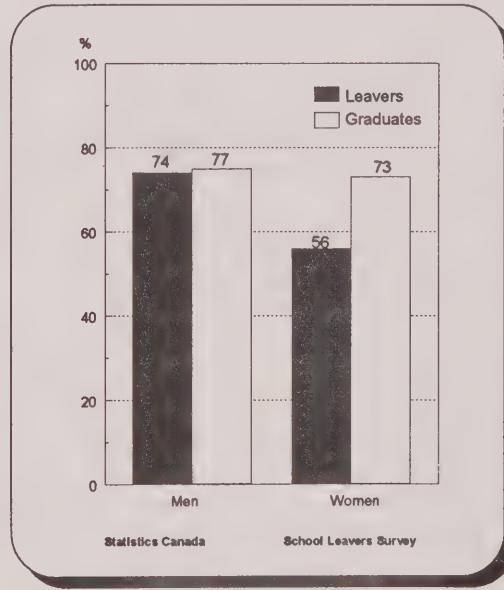
A majority of students, both leavers and graduates, consumed alcohol to some degree during their last year of school. In fact, a higher proportion of graduates (75%) than leavers (67%) reported that they had done so. Female graduates were much more likely to report some degree of alcohol use than were female leavers (73% versus 56%) while similar proportions of male leavers (74%) and graduates (77%) consumed alcohol in their final year (Chart 7-2).

Leavers, however, were more likely than graduates to be regular rather than occasional drinkers.<sup>2</sup> Whereas 18% of leavers reported that they had consumed alcohol regularly, the corresponding proportion among graduates was 11% (Chart 7-1).

Male leavers tend to have the greatest likelihood of being regular drinkers, with 21% reporting consumption during their final year of school.

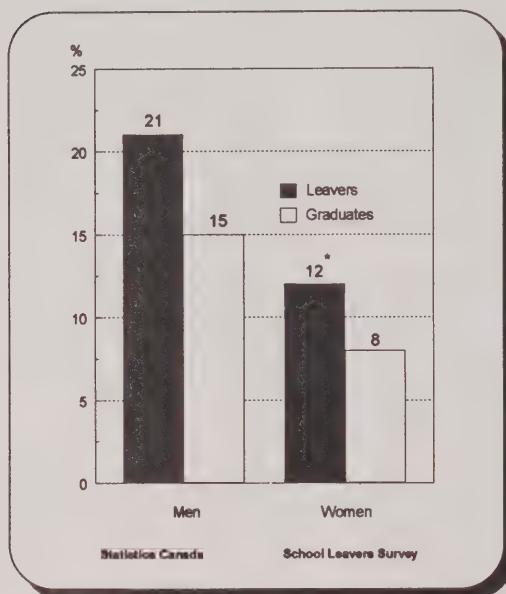
Chart 7-2

Alcohol use in last year of school, leavers and graduates by gender



Regular drinking was less common among women (Chart 7-3).

**Chart 7-3**  
Regular alcohol consumption in last year of school, leavers and graduates by gender



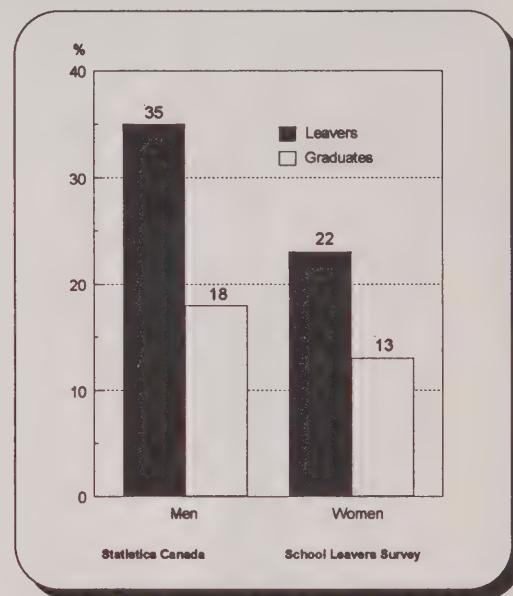
## SOFT DRUGS

The use of soft drugs such as marijuana and hashish, and the misuse of prescription drugs such as tranquilizers, was much less common than alcohol consumption among students. Leavers, however, were considerably more likely than graduates to report that they had engaged in these activities.

In fact, the proportion of leavers who had used soft drugs or misused prescription drugs (30%) was nearly double the proportion of graduates (16%) (Chart 7-1). For both groups, these activities tended to be experimental rather than regular, with 22% of leavers and 14% of graduates reporting experimental use. Few members of either group were regular users, but again, this level of consumption was reported more often by leavers than graduates: 9% compared with 1%\*.<sup>3</sup>

Men tended to use soft drugs or to misuse prescription drugs more frequently than did women. Yet regardless of their gender, a higher proportion of leavers than graduates had engaged in these activities (Chart 7-4).

**Chart 7-4**  
Soft/prescription drug use in last year of school, leavers and graduates by gender



## HARD DRUGS

Hard drug use was relatively rare among students during their last year of school. Even though few individuals reported using substances such as cocaine, heroin, speed and LSD, leavers were over three times as likely as graduates to admit that they had done so: 7% versus 2% (Chart 7-1).

Hard drug use was higher among leavers of both genders than among their graduate counterparts. While 8%\* of male leavers had used these substances, the rate among male graduates was just 3%. The disparity was similar among women; however, the proportions were too small to be reliable.

As was the case for soft drugs, hard drug use among both groups tended to be experimental rather than regular. About 5%\* of leavers and 2% of graduates were experimental users of hard drugs.

## OTHER SUBSTANCES

Misuse of other substances such as glue or solvents was even less prevalent among students than was hard drug use. In fact, 98% of leavers and 99% of graduates had never engaged in such activities in their final year.

## SUBSTANCE ABUSE

Overall, just 18% of students had engaged in substance abuse of any sort, (except alcohol consumption) during their last year of school. However, the proportion of leavers who reported at least one of these activities (32%) was double the proportion of graduates (16%). As well, regular substance abuse was far more common among leavers than graduates, with 9% of the former, compared with 1%\* of the latter, indicating that they had used these substances "often."

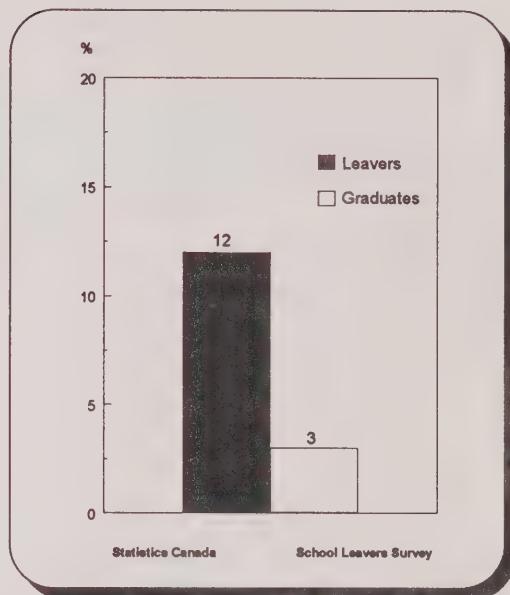
## CRIMINAL OFFENSES

A small percentage of students had been convicted of a criminal offence (excluding parking and speeding tickets) during their last year of school. However, the overall rate of conviction among leavers (12%) was four times that among graduates (3%) (Chart 7-5).

At 16%, the criminal conviction rate was highest for male leavers and far exceeded that of male graduates (4%). Women were much less likely to have been convicted of a crime, and in fact, the proportions were too small to be reliable.

Chart 7-5

Criminal convictions during last year of school, leavers and graduates



## SUMMARY

During their last year of school, leavers engaged in substance abuse more frequently and regularly than did graduates. As well, a much higher proportion of leavers than graduates had criminal records.

Although participation in such activities may not necessarily lead to the decision to leave school, these deviant behaviour patterns may act as red flags, indicating students at greater risk of leaving school before graduation.

## REFERENCES AND NOTES

<sup>1</sup> Students were asked about their alcohol consumption, drug use, and criminal records during their last year of school. The time in question varies for different individuals, as they did not all leave school in the same grade or at the same age. Thus, alcohol consumption, for example, would have been illegal for those who left school before they reached the drinking age, but not for older students.

<sup>2</sup> Students who reported that they consumed alcohol "rarely" or "sometimes" were classified as "occasional" drinkers; those who drank "often" were classified as "regular" drinkers.

<sup>3</sup> Students who indicated that they used drugs "rarely" or "sometimes" were classified as "experimental" users; those who reported that they used drugs "often" were designated "regular" users.

## 8. Labour market and life outcomes

### INTRODUCTION

Whether or not a student leaves high school early or graduates has important employment and life consequences. This chapter examines the post-high school labour market and life outcomes of leavers and graduates. The education and training youth receive after high school is also important but will not be assessed since the focus is on comparing pure leavers with pure graduates i.e. those in each category who have not received additional education or training.

With continuers excluded, 80% of the sample are high school graduates and 20% are leavers. The graduates and leavers are composed of three groups: (a) those who are in postsecondary education or other training programs, (b) those who have some, or have completed, postsecondary education or other training programs, and (c) those with little or no subsequent education or training.

While the majority of graduates have continued on to further education or training, the majority of leavers had not. Sixty-five per cent of the graduates were currently enrolled in an advanced program, 9% had completed advanced education or training, and 26% had little or no further education/training. Interestingly, 11% of the leavers were in advanced education or training, 6% had completed, and 83% had little additional education or training. The latter set of numbers indicate that some high school leavers, 17%, are in or have completed higher levels of education.

The SLS captures the behaviour of 18-20-year-old youth at a particular moment in time, April - June 1991. Labour force experience will vary with level of education attained and with the time of entry into the labour market. As indicated above, many of the graduates have gone on to postsecondary education, a few have even completed their postsecondary programs and some of the leavers have also entered postsecondary education or have received

additional training. It does not make sense to examine the work behaviour of students who are still in their programs. As well, since the numbers of leavers and graduates who have completed additional education/training are small and subject to variation, they do not permit separate analyses.

The comparison of pure leavers with pure graduates will provide conservative estimates of the impact of high school completion since the leavers will have had an opportunity to gain more work experience.

### EMPLOYMENT

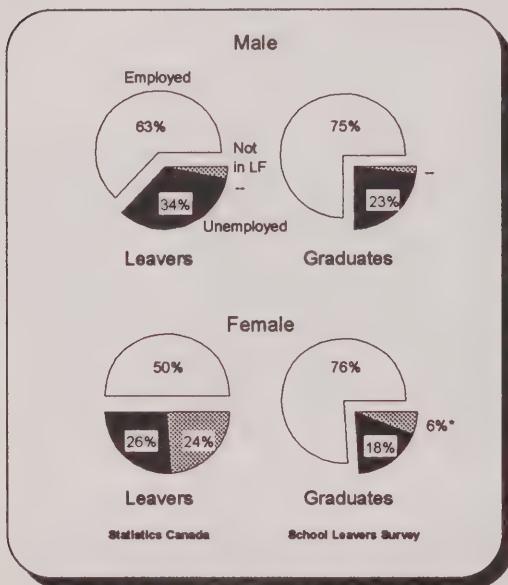
The vast majority of both leavers and graduates had worked at a job since leaving school (92%). A similar proportion of male leavers (97%) and male graduates (93%) held a job, but female graduates (92%) were more likely than female leavers (84%) to have done so. Two thirds of leavers and graduates had just 1 job in the last six months. Graduates were more likely than leavers to have had 2 jobs and less likely than leavers to have had no job in the last six months (Table 8-1).

Leavers were more likely than graduates to be unemployed the week prior to being surveyed. Thirty-four per cent of the male leavers were unemployed compared with 23% of the male graduates. For women, 26% of the leavers were unemployed compared with 18% of the graduates. Twenty-four per cent of female leavers were not in the labour force compared with 6% of female graduates (Chart 8-1).

Table 8-1 Number of jobs held in the past 6 months

Number of jobs	Total %		Males %		Females %	
	Graduates	Leavers	Graduates	Leavers	Graduates	Leavers
1	68	67	69	68	67	65
2	21	14	20	16	23	10*
3+	6	6*	7*	6*	5*	--
None	5*	13	--	10*	6*	19

Chart 8-1  
Labour force status by gender



More male leavers than graduates were employed in blue collar primary industries and processing occupations (62% compared with 48%) and fewer were in white collar clerical, sales and service jobs (28% compared with 44%). Female leavers and graduates were clustered in clerical, sales and service jobs with female leavers tending to be in service jobs (40%) and female graduates tending to be in clerical and related positions (39%).

It was surprising that 26% of the male leavers and 17% of the graduates worked 50 or more hours per week (Table 8-2). Another 47% of the male leavers and 56% of the graduates worked 40 - 49 hours a week. Females were less likely to work long hours; however, 34% of female leavers and 41% of female graduates worked between 40-49 hours per week. Although there was little difference between leavers and graduates, 11-12% of the males and 24-26% of the females worked less than thirty hours per week (Table 8-2). The two main reasons given for working less than 30 hours per week were "Only a part-time job" and "Could not get more hours" (Table 8-3).

## INCOMES AND SOURCES

Despite long weekly hours, both leavers and graduates were not doing very well financially. Respondents were asked to indicate their personal income from all sources before taxes and deductions over the last 12 months. Fifty-one per cent of male leavers and graduates had total personal incomes of \$10,000 or less. Only 12% of the male leavers and 11% of the graduates had personal incomes over \$20,000. Female graduates and leavers had even lower total personal incomes. Sixty-one per cent of the leavers and 66% of the female graduates received \$10,000 or less over the past year and a negligible proportion of both groups had total incomes of \$20,000 or more. Twenty-two per cent of the female leavers compared with 13% of the graduates did not know their total personal

**Table 8-2 Hours worked last week by gender (%)**

Hours	Males		Females	
	Graduates	Leavers	Graduates	Leavers
50+	17	26	7*	--
40-49	56	47	41	34
30-39	16	13*	25	35
<30	11*	12*	26	24*

**Table 8-3 Main reason for working less than 30 hours last week (%)**

Reason	Graduates	Leavers
"Only a part-time job"	42	49
"Could not get more hours"	41	37*

income. So, both leavers and graduates had extremely modest earnings, which undoubtedly reflect their low education level and entry-level jobs.

Concerning the sources of this income, and consistent with the employment and family background patterns discussed in previous sections:

- ◆ more leavers (28%) than graduates (23%) received unemployment insurance.
- ◆ more leavers (18%) than graduates (8%) received social assistance or welfare.
- ◆ three times as many female leavers (30%) as graduates (10%) received social assistance or welfare.
- ◆ regardless of graduation or gender, about 67% did not receive financial support from family, including spouse or common law partner.
- ◆ many more female leavers (29%) than graduates (10%) received family allowance income.
- ◆ for 34% of the leavers and 23% of the graduates their income is the only source of income for the household.

## JOB SEARCH

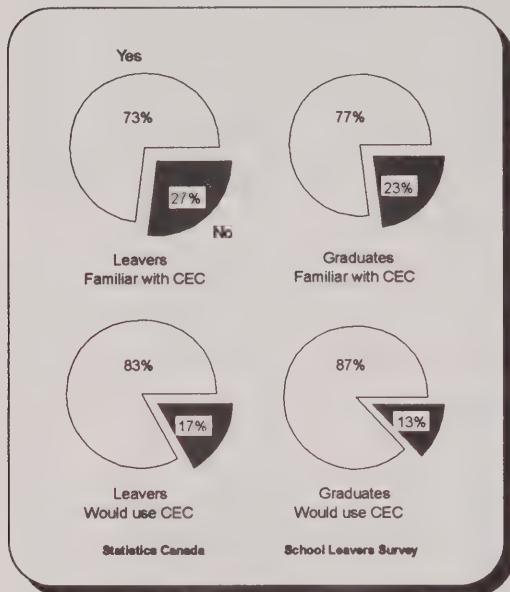
If respondents were to look for work, what kind of job search activities would they engage in and what kind of help would they receive? There didn't appear to be much difference between leavers and graduates in their job search activities. However, leavers were more restricted by their job search skills and anticipated less help than graduates.

For example, when asked "Are you familiar with Canada Employment Centres or other federal programs?" 27% of leavers said "no" compared with 23% of graduates, and for those who were familiar, 17% of leavers, compared with 13% of graduates, said that they would not use them if they were looking for work. Most leavers and graduates (66%) were unfamiliar with provincial employment or training programs and further, when questioned about usage, 20% of leavers and 14% of graduates indicated that they would not use these programs. Unfamiliarity with private employment agencies was high, 76-78% (Charts 8-2-A-B-C).

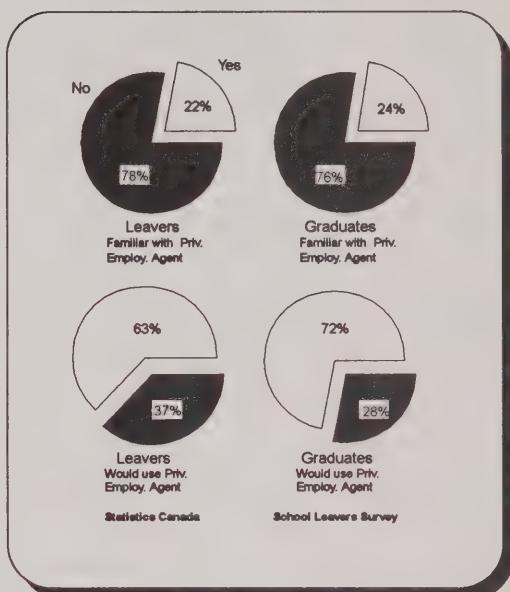
Most leavers and graduates indicated that they would not receive job search assistance from school counsellors or teachers. This was especially the case for male leavers (79%). Most leavers and graduates would contact employers directly, get help from friends or relatives, or

**Chart 8-2A**

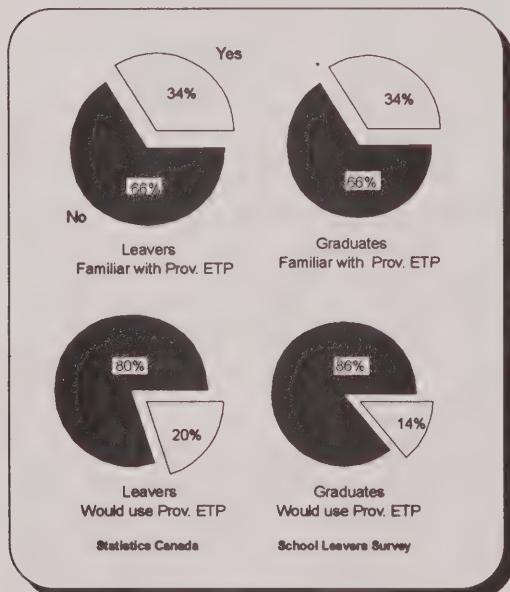
Familiarity with, and probable use of, Canada Employment Centres

**Chart 8-2C**

Familiarity with, and probable use of, private employment agencies

**Chart 8-2B**

Familiarity with, and probable use of, provincial employment or training programs



would use newspaper ads. However, more leavers than graduates indicated they would not get help from friends or relatives, or would not use newspaper ads. Nineteen per cent of male leavers, for example, said they would not use newspaper ads and 18% of female leavers said that they would not receive help from friends or relatives (Table 8-4).

Although the overall percentages are low, more leavers than graduates indicated that they had difficulty filling out job applications and that their reading, writing and mathematics skills limited their job opportunities. In particular, 29% of female leavers said their basic mathematics skills restricted their job opportunities (Table 8-5).

**Table 8-4 Job search help**

Job search help	Males				Females			
	Leavers		Graduates		Leavers		Graduates	
	% Yes		% Yes		% Yes		% Yes	
	Yes	No	Yes	No	Yes	No	Yes	No
Help from high school counsellors or teachers	21	79	31	69	31	69	33	67
Use newspaper ads	81	19	88	12	91	9*	95	5*
Help from friends or relatives	85	15	91	9	82	18	90	10
Contact employers directly	98	--	97	--	96	--	97	--

**Table 8-5 Basic skills and job search**

Basic skills	Males		Females	
	Leavers	Graduates	Leavers	Graduates
% yes				
Difficulty filling out job applications	16	6*	17	5*
Reading/writing skills limit job opportunities	15	6*	18	6*
Math skills limit job opportunities	19	11	29	14

## PAST TRAINING AND FUTURE PROSPECTS

In a competitive global economy, the extent of training done by private sector companies is an important issue. Sixty-six per cent of female leavers and 51% of male leavers who were in the labour force had not received any training from an employer. Similarly, many graduates, 47% of women and 45% of men, had not received any training. Those who need training the most, the leavers, are less likely to receive it.

The future prospects for the current generation of young adults with low education appear uncertain. Most leavers and graduates, however, either planned to take further education or training or were interested in acquiring new skills (97% of graduates and 96% of leavers).

Leavers, to a greater extent than graduates, were interested in pursuing engineering and applied science technologies and trades, while more graduates were interested in educational, recreational and counselling services; commerce, management and business administration; engineering and applied sciences and health professions (Table 8-6).

Career uncertainty or indecision, lack of knowledge, and the absence of a concrete direction may be important underlying factors regarding educational and vocational goals. Graduates to a greater extent than leavers may have specific, long-term, occupational destinations which serve to motivate and structure their educational progress. Leavers, on the other hand, may lack these objectives, and thus appear less motivated and focused. This uncertainty is also reflected by the fact that over twice as many leavers (20%) as graduates (9%) did not know where they would get the type of

**Table 8-6 Skill or type of training desired**

	Leavers (%)	Graduates (%)
Educational, recreational and counselling services	--	6
Fine and applied arts	8	6
Humanities and related fields	--	3*
Social sciences and related fields	6*	9
Commerce, management and business administration	12	20
Agriculture and biological sciences/technologies	4*	3*
Engineering and applied sciences	--	5
Engineering and applied science technologies and trades	32	25
Health professions, sciences and technologies	--	6
All other, not elsewhere classified	3*	--
No specialization	11	--
Don't know	13	13

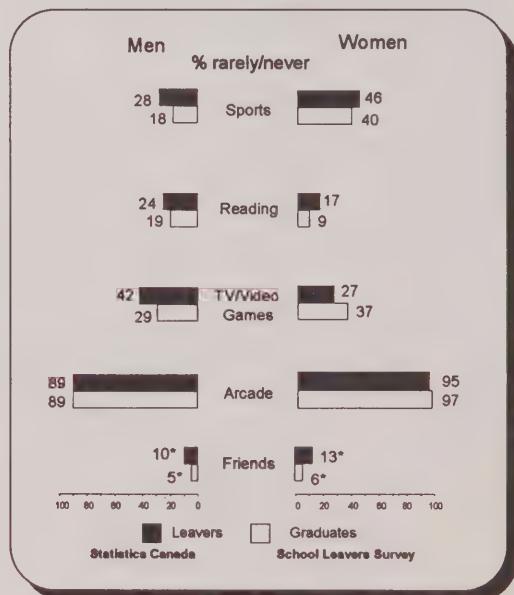
training or education that they specified, and more leavers (24%) than graduates (13%) indicated either "no specialization" or "don't know" when asked what skill or type of training they desired.

#### LEISURE TIME ACTIVITIES

Respondents were asked about how they spent their time. More leavers than graduates reported 'rarely' or 'never' engaging in most of the pastimes. The most popular pastime was spending time with friends, yet twice as many leavers as graduates seldom did this.

The degree of difference between leavers and graduates varied by gender. Twenty-eight per cent of male leavers compared with 18% of male graduates reported rarely or never participating in sports activities. When asked "How often do you spend time reading newspapers, magazines, books" 17% of female leavers compared with 9% of female graduates said rarely or never. Many more male leavers (42%) than graduates (29%) rarely/never watched TV (Chart 8-3).

**Chart 8-3**  
Leisure time activities by gender



## **JOB, FINANCIAL AND LIFE SATISFACTION**

Overall, job satisfaction is high (86%). However, substantial dissatisfaction with their financial situations exists, with more leavers (45%) dissatisfied than graduates (39%). Basically, both groups are satisfied with their life in general, but, 15% of leavers compared with 8% of graduates are dissatisfied.

## **SUMMARY**

The labour market and life prospects of leavers appear to be dismal. Many more leavers than graduates had not taken any further education or training. More leavers than graduates encountered unemployment and more male leavers than graduates worked in blue collar occupations, while more female leavers than graduates worked in service jobs. Despite lengthy hours, both leavers and graduates had low incomes, and leavers had greater dependency on unemployment insurance, social assistance, and family allowances. Financial dissatisfaction was high, particularly for leavers.

In light of the long work hours, it may be difficult for leavers to escape from their economic and educational circumstances. More leavers than graduates had difficulty filling out job applications and indicated that their basic skills restricted their job opportunities. Leavers revealed more uncertainty about their future career directions than graduates.



## 9. Conclusions

Results from the SLS and other surveys indicate that the national high school non-completion rate in 1991 was in the 18 - 21% range, about 10% lower than the 30% figure estimated from administrative records.

Canadian youth today are staying in school longer and more are completing their secondary school programs than in the past. This is likely due in part to increased emphasis on the importance of educational attendance and completion, the economic recession, and to a pattern of temporary departure - return to school - and eventual completion. In addition, some students leave high school before obtaining their certificates or diplomas but take other education or training.

Nevertheless, the fact that one fifth of young adults in Canada are school leavers instead of graduates, is a cause for concern. A particularly serious issue is the high school grade level at which leavers are departing and their ages. Almost two thirds of the school leavers have only grade 10 education or less and are 17 years old or younger.

In a competitive economy dominated by technology and advanced skills and competencies, high school completion may be the minimum level of education needed to have an opportunity to compete in the labour market, obtain an entry-level job, and to secure a basic standard of living. Much more education and training is required for decent jobs, incomes and life-chances. Anything less than the minimum may restrict youth to long hours, tedious jobs with little opportunity for advancement, and a low quality of life. The economic and social costs to individual Canadians and to Canadian society are too high to become complacent about a 20% non-completion rate.

The fact that the non-completion rate varies by gender and province, with higher rates for males

in the Atlantic Provinces, Quebec and Ontario deserves further investigation. Given the substantial gains that women have made in educational attainment and academic achievement, what factors influence the substantial number of young men to leave high school before completion?

As indicated above, further research is needed on the after-high school education or training received by youth. While the School Leavers Survey can estimate rates and investigate background and school experience variables, it and other cross-sectional surveys can say little about the process of alternative, equivalent, and advanced education beyond the age group of their samples, in the case of the SLS, 18-20-year-olds.

In order to examine the educational attainment of youth at a time when increasing attendance, including mixed work-study patterns and alternative educational routes are popular, it may be necessary to select an older age cohort for investigation. For example, surveys of individuals 23 - 25 years of age containing retrospective questions will reveal the paths and patterns Canadian youth have taken to arrive at their current education and employment situation. A second possibility for further inquiry involves a follow-up of the SLS respondents after three years to update their education, training, employment and income circumstances. A third type of study which would contribute knowledge in this important area is to replicate essential components of the School Leavers Survey (with new measures added) in 1995, thereby obtaining the latest rate information, and then to track respondents over the next 3 - 5 years, the crucial formative period concerning education, training and employment. Longitudinal studies are best able to examine this process.

High school leavers do not represent one homogeneous group. Contrary to the stereotypical picture of a "dropout" many leavers

do not come from high risk backgrounds or have academic difficulties in school or work part-time to the exclusion of schooling. In addition, leavers are not extensively engaged in drug and alcohol consumption. Much more research needs to be done on key sub-groups such as leavers with high academic averages, low risk backgrounds, and those who leave although their high school experiences have been positive.

School leaving is the result of a number of contributory factors. Gender, province, socioeconomic background, school and work experience influence the departure process.

If there is a common thread which links the leavers, it may be that they are less attached or connected to the institutions which are supposed to benefit them. Some families may not have time, material resources and strong beliefs about the importance of education. In these circumstances, a positive environment of encouragement and support for school completion may not be provided. Similarly, some peer groups may not value school attendance, academic success, and educational attainment. The curriculum and instructional practices in some schools may not involve and integrate students, and may not provide the practical, contemporary relevance which students and their communities seek. The high schools, in fact, may not have the time, resources and motivation to accomplish everything with which they are charged.

Not having benefitted by schooling, leavers are at a further disadvantage in seeking meaningful employment. Unemployment, long work hours and low income levels result. This process of cumulative disadvantage means that it becomes increasingly difficult for school leavers to get further education, training or skill development.

The School Leavers Survey highlights the importance of parental, student and school involvement in education. With the support and participation of communities, governments and employers, education would be strengthened as an important collective enterprise.

# Appendix A. SLS Methodology

## 1. INTRODUCTION

This appendix describes the methodology used by Statistics Canada in conducting the 1991 School Leavers Survey. It presents some of the problems associated with identifying and contacting a sufficient sample of school leavers to produce reliable estimates. These problems include choice of sampling frame and appropriate stratification, difficulties in tracing, and considerations for weighting.

The two primary objectives of the survey were:

1. to develop comparative profiles of three groups of secondary school attendees, those who successfully completed secondary school (graduates), those still attending (continuers) and those who left school before receiving a diploma or certificate (leavers).
2. to establish rates of leaving school before graduation in Canada and the Provinces.

The first part of this appendix provides a brief description of the reasons for the choice of sampling frame, the target population, stratification and sample size determination, as well as a description of how the 1991 School Leavers Survey was implemented. In the second part of the appendix, the contact and response rates are provided. The last part of the appendix indicates potential bias due to the tracing difficulties and the attempts to adjust for it.

## 2. DESIGN

### **2.1 Sampling Frame**

In the very early stages in the design of the School Leavers Survey, approval was obtained to use the Family Allowance Files as the survey

frame. The Family Allowance program is federal and provides a monthly payment to a supporting parent or guardian of young persons in Canada. It covers Canadian citizens, landed immigrants as well as anyone legally residing in Canada until the month that the young person turns eighteen years of age. Payments will cease earlier than age eighteen when the parent or guardian ceases to provide financial support for the young person.

At the time the decision was made to use these files, it was believed that they were the most complete listing of young persons under age 15 in Canada. After the age of fourteen, there is an increasing decline in the coverage of each age group. Given that the basis for these files is as a payment to the supporting individual, it was believed that the address information would be kept up-to-date. There is also a variable on the files which gives the reason why payments would have stopped prior to age eighteen. The reasons "parent no longer supports child", "child is married" and "child has income" were thought to pre-identify those young persons who were more likely to be leavers than other individuals.

There are Family Allowance files for every year as well as individual ones for each province. One of the first steps in creating a frame was to link records from year to year based on an identification number that does not change as long as the individual remains within the same province. Unfortunately, when an individual migrates from one province to another, the same identification number is not used. There are codes that tell the user of the files that the individual has been transferred to a specific province. On the other hand, there are also codes on the provincial file where the individual next appears that indicate the province from which the individual moved. Using these codes and the name and age of the individual, matching between provincial files was performed.

Matching of records was also required if the support for the young person was transferred from one parent to the other, or from a parent to an agency, etc. These agencies were mainly orphanages, transition homes and children's aid societies.

There is however one potential problem in using the Family Allowance files. The survey was to be conducted with the young person for which the payment is provided. However, the personal information maintained on the files specifically for that individual is first name and birth date. Since the files are maintained mainly to send payments to the supporting person for the child, most of the information, such as surname and address, relates to the supporting person. The decision was to assume at first that the young person had the same surname as the individual receiving the payment. In most cases this would be the mother. Situations when mother and child do not have the same surname are a practical problem which the interviewers would later have to confront.

Five years of Family Allowance Files were used to generate a sampling frame of 18-20-year-olds.

## 2.2 Target Population

The ages of eighteen, nineteen and twenty were chosen as the target age group for two reasons. First to obtain enough leavers and graduates in our sample and to be able to evaluate the differences in their labour market experiences, the project team decided that a selected individual needed to be twenty years of age. This would allow these individuals to have the normal length of time to complete secondary school and be in the labour market for at least a short period of time. The team also decided to cover the age of eighteen for the opposite reason, that is to ensure obtaining enough continuers. The suitability of selecting these three ages to answer the required objectives was decided upon using the results of a test conducted in 1990.

Choosing these three ages created a problem in using the Family Allowance files. As mentioned earlier, the Family Allowance program supports individuals only up to the age of eighteen. Thus all of our selected persons would no longer be covered by the program and the addresses would be out-of-date. For instance, the twenty-year-olds would be last on a file three years prior to the survey year. To compound this problem, for those persons whose payments had stopped prior to age eighteen, their addresses would be even further out-of-date.

One property of the Family Allowance files helped in finding the most current address for the sampled persons. Families are maintained together on the files, and as long as payments are being made to a younger person within that family, the record of the sibling whose payments have stopped is kept on the file. Thus, it was possible to obtain a more current address for those individuals who had younger siblings.

All ten provinces were covered in the survey but the Yukon and Northwest Territories were excluded mainly due to cost considerations.

Two further adjustments were made to the target population. The first was to exclude individuals where the recipient of the payment was an agency. In addition, during the creation of our families, to find the most current address, it was discovered that there were some cases where there was a large number of individuals within the same family who were within eighteen to twenty years of age. It seemed quite unlikely that a mother could have as many as eight children within three years of age. Further investigations pointed out that this was happening within Saskatchewan mainly and it was believed that these cases were Hutterite communities where one woman receives the payments for all families in the community. To control response burden, the decision was made to select at most two individuals within the same family.

## 2.3 Stratification

Once the target population was decided on and the frame was created from matching of the 1986 to 1990 Family Allowance files, stratification was then performed. Variables that were available on the records to use for stratification purposes were age, province of residence and payment status (the variable that could potentially identify a greater proportion of leavers). Two tests were performed in 1990 to evaluate the ability of this chosen variable to pre-identify potential leavers. Sex was not available on the files to use as a stratification variable.

Table A-2 shows the population count for the frame created for the School Leavers Survey. Each age and province cell was subdivided using the payment status code variable to pre-identify potential leavers to create two further breakdowns known as the "Potential" stratum (where they had one of the chosen codes) and the "Non-Potential" Stratum. The effectiveness of these codes to pre-identify potential leavers will be shown later in the results of the survey.

## 2.4 Sample Size and Selection

To estimate school leaver rates, only the twenty-year-olds would be used. This decision was taken since there would be less chance of twenty-year-olds being continuers in secondary school. "Continuer" can be thought of as a "temporary state" which results in either "dropping out" or "graduating". All three ages together would be used to analyze the differences in the characteristics of the continuers, leavers and graduates since there would not be enough graduates at age eighteen nor enough continuers at age twenty to use only one of the age groups.

Based on the results of the testing done in 1990, approximate numbers of leavers, graduates and continuers were obtained for each stratum. Approximate response rates and trace rates from the pilot test were also available. To provide national and provincial leaver rates for

twenty-year-olds within a coefficient of variation of 16.5%, and to have continuers, leavers and graduates, each considered separately, possess some characteristic from the questionnaire estimated within a coefficient of variation of 16.5%, a final sample size of 18,000 was decided upon. Table A-3 provides the sample size for each stratum. A simple random sample was taken in each stratum, except of course for those strata which were take-all.

## 2.5 Obtaining Telephone Numbers

Telephone interviews were chosen as the method of collecting the data. It was felt that the length and complexity of the questionnaire would create problems for a mail survey both in terms of lower response rates and difficulty in being self-enumerated. As well, it was felt more efficient to conduct the tracing over the telephone and once contact was made using this mode, it would not be a substantial increase in costs to complete the questionnaire using the same mode. Personal interviews were ruled out because of the cost. Unfortunately, the Family Allowance files contain addresses but no telephone numbers are available. Telephone billing files are available at Statistics Canada and were matched to the addresses on the frame to assist in the tracing process. From testing done in 1990, it proved beneficial to provide the interviewers with a number of telephone numbers from which they could attempt to trace the selected individual. In fact, five methods of matching between the sample and the telephone files were performed. Each of the five methods is given below along with a description of the reasons for its choice.

Match 1: by surname, exact address, postal code. This match should be the best method to contact the guardian or the selected young person.

Match 2: by surname, partial address, postal code. The removal of the civic portion of the address was done to accommodate slight coding differences between the

Family Allowance and telephone billing files.

**Match 3:** by surname, postal code. This match was performed to allow the possibility of another family within the same small geographic area with the same surname knowing the whereabouts of the selected person or family. In this case we would be finding either relatives or persons who over time might have been getting each other's mail or phone calls. These individuals could know of the movement of the selected individual.

**Match 4:** by exact address, postal code. In this case, a new family could move into the same dwelling in which the selected person had lived and possibly would know of an address to which to forward mail to. As well, we could have used the wrong surname for matching. The surname used from the Family Allowance file in most cases would be the mother's surname while the telephone files could contain the father's surname. This was an attempt to allow for different surnames within the same household.

**Match 5:** by exact previous address, postal code. In the event that the matching of records for a family between provinces was incorrect, this last match was performed. This match also accommodated those situations where the support for a selected individual was transferred from one parent to the other and the previous parent knew the whereabouts of the selected individual, as well as the situation where the people who lived at the previous address of the family would know of the whereabouts of the selected individual.

The School Leavers Survey was conducted by telephone on a Computer Assisted Telephone Interviewing (CATI) system. The matched telephone numbers were loaded into the system and the interviewers would try each of the

numbers provided in an attempt to trace the selected individual. Up to thirty-six telephone numbers were provided. If all telephone numbers proved unsuccessful, the interviewers would use other typical tracing procedures to locate our selected family or young person, such as phoning neighbours found through city directories or contacting directory assistance.

The first step that faced the interviewers was to confirm whether the selected individual was at the telephone number reached or was a member of the family living at another location with a different telephone number. If the response indicated that such a person was not known, then the interviewer tried to establish one of two scenarios. The first was to try the other surname provided for the spouse on the Family Allowance files as the surname for the selected young person and determine whether that person lived there or was known to the family. Failing this, the interviewer then tried to identify whether the correct family had been located but there was a problem with the selected person. To do this, interviewers were provided with names for up to three siblings as well as the information on the spouse available from the Family Allowance files. If it was confirmed that the correct family had been located but the selected person no longer resided at that household, the interviewers tried to obtain a telephone number so that the tracing could continue for the selected person. If this proved unsuccessful, then the case became one of "traced family but untraced respondent". The frequency of this occurrence is provided in section 3.2.

## 2.6 Implementation by Wave

The size of the sample for the School Leavers Survey was 18,000 selected individuals. To ensure that all cases had the same chance of being tried, a decision was made to implement the survey in a series of five waves, each wave to be in the CATI system for relatively equal amounts of time. The sample was divided into four parts, each part being representative of the total sample. The first part of the sample was put into the

CATI system as wave one. When the time given for wave one had expired, the unresolved cases were removed except for those which had appointments for call-back. The second wave was then put into the CATI system along with the appointments for its allotted time. All four parts of the sample were handled in this fashion as waves one to four. The fifth and final wave then put all the unresolved cases from the first four waves back into the system and further attempts were made for these.

### **3. CONTACT RESULTS**

#### **3.1 Hit Rates**

The first result to be presented is that of a "hit rate". By this term, we mean the proportion of respondents that were classified as being leavers. One of the primary reasons for using the Family Allowance files was to be able to pre-identify leavers as much as possible so that a sufficient number could be found for analysis. Table A-4 shows the results of this stratification by province for the three age groups collapsed. The term "ever left" refers to the fact that at one point in time, the individual had left but now could be classified as a continuer, leaver or graduate as some had in fact returned to secondary school. This table shows that a much higher rate of finding leavers was found in the potential stratum over that in the non-potential stratum. Thus the use of this file did in fact enable more leavers to be found than would otherwise have been possible using a different frame that did not provide such information.

#### **3.2 Tracing and response rates**

Interviewers were instructed to make all reasonable attempts to obtain interviews with respondents. For individuals who at first refused to participate in the School Leavers Survey, interviewers stressed the importance of the survey and the respondent's cooperation. For cases in which the timing of the interviewer's call was inconvenient, an appointment was arranged

to call back at a more convenient time. For cases in which there was no one home, numerous call backs were made. Under no circumstances were sampled individuals replaced by other persons for reasons of non-response.

Table A-5 presents the tracing and response rates achieved at the Canada level for all three ages together. "Recipient" is used to indicate whether or not success was achieved in finding the family of the selected young person while "respondent" refers to the selected individual. This table shows that for 34% of the sample there was no success in finding either the selected individual nor the parent or guardian. However, the response rate once the selected individual is traced is high : of the 10782 youths traced, 9460 youths were completed responses and in-scope to the survey (88%).

One other point to make from this table is that for 6% of the sample, the parent or guardian was traced with success but the selected person was not traced. These cases were those where the family had lost contact with the young person.

Table A-6 shows the response rate for twenty-year-olds by province and potential versus non-potential stratum. The twenty-year-olds were the targeted age group to estimate the national and provincial leaver rates. The response rate for the non-potential stratum is higher than that for the potential stratum. Table A-5 shows that once an individual was traced, a response was obtained 88% of the time. From this one could say that difficulty in tracing was the major cause of the non-response. Thus the lower response for the potential stratum is due to the inability to trace the family.

One other factor to be taken into account is the fact that for the potential stratum, by definition, the Family Allowance payments had ceased. This meant that the addresses on the files were more out of date than those for the non-potential stratum. This factor on its own could be a major reason for the response differences.

#### 4. CORRECTIONS FOR POTENTIAL BIAS

During the data collection phase, it was noticed that the proportion of completed cases within a province was decreasing as one moved from the East coast of Canada to the West. It was determined that, because of the time zone differences, a larger proportion of the interviewer's shift was being applied to the eastern provinces than to the western provinces. The problem with this happening was that the provincial estimates from the West would not be as reliable as those from the East. Another danger was the fact that the non-response was linked to the inability to trace the selected individual, as discussed in section 3.2. It was also discussed in that section that the harder to trace individuals could, in fact, more likely be leavers resulting in the estimates of leaver rates for the West being too low. To rectify this problem, priority was given to the four western provinces during the final phase of data collection to increase their respective response rates. The final response rates for twenty-year-olds for the survey are given in Table A-6. Similar results were found for the other two age groups.

After completion of the survey, an interesting result was found in the leaver rates for twenty-year-olds by province. Table A-7 presents rates for "Ever left secondary school" for the twenty-year-olds by province. Again one notices a decreasing rate from the East coast of Canada to the West. A concern was raised that this decreasing leaver rate was somehow linked to the method of handling the problem described in the previous paragraph. It was hypothesized that because the priority given to the western provinces was not constant over the collection period, then the proportion of the resolved cases that consisted of the harder to trace individuals was not the same in the West as it was in the East. It seemed to be a reasonable assumption that the hard to trace were in fact more likely to be leavers thus producing the lower leaver rate. On the other hand, it was also a reasonable assumption that the estimated leaver rates were showing the actual situation in Canada. The

possibility that a bias had been introduced to the estimates was a concern. Investigations were done to analyze and adjust for this potential bias. The next points briefly describe these investigations.

**Wave Implementation:** Section 2.6 discussed the fact that the School Leavers Survey had been implemented by wave. Two factors were considered to be reasons to look at the marginal differences in finding leavers by wave. First, the interviewers for this survey had very little experience with the CATI environment or in conducting any type of survey. Hence they might have been more successful in tracing leavers in the latter part of collection. The second reason was the priority given to the West during the last wave because of finding the lower response rates. The investigation attempted to find a marginal increase in the leaver rates for respondents by wave. This pattern did not emerge and so no adjustment for the potential bias was made using wave.

**Number of Attempts/Calls:** The CATI system provides counts of the number of attempted calls and the number of completed calls for each case. If one assumes that leavers are harder to contact and therefore require more attempted calls before a completed call is achieved, one could make similar assumptions about the school leaving status of the unresolved cases. That is, unresolved cases would be expected to include a proportionately higher number of leavers. This "estimate" of the number of additional leavers contained in the unresolved portion of the sample could then be used to adjust the bias in the estimates. However, analysis of the data from the sample which required numerous calling attempts before a contact was made showed results which did not support the original assumption, and therefore could not be used as a means of bias adjustment.

**Sex:** In section 2.3, mention was made of the fact that there was no sex variable on the Family

Allowance file. However, the results from the survey showed that there was a difference between the leaver rates by sex. Post-stratification by sex was performed using the following method. From the respondent file, the probability of being male given a first name was calculated. For those names with small frequencies, manual judgement was used to assign either 100%, 50% or 0% values. Then for the non-respondents, since first name was on the Family Allowance file, the probability of being male for that name, calculated from the respondent file, was used along with a random number to assign a sex to the records.

**Demographic Projections:** Since the target population for the survey was to cover all individuals aged eighteen to twenty in the ten provinces, comparisons were made between the estimates of total population achieved from the survey with those from demographic projections. The numbers were in fact quite similar although not exact. It was decided not to adjust to reflect the demographic counts for two reasons. The first reason was that the province of interest for the survey was the province last in school and not that of current residence. Another reason, although not as significant as the first, was the fact that the demographic projections were based on the 1986 census and could be somewhat dated. The 1991 census figures were not available at the time.

To conclude this section on the corrections for potential bias, the only adjustment performed was to post-stratify by sex. The other investigations did not lead to methods that could adjust for a bias nor did they rule out that the bias did not exist. On the other hand, the estimates of school leaver rates may in fact reflect the reality of Canadian society in that there are differences between the Eastern and Western provinces. What one can say is that if there is any bias in the estimates, then these estimates are lower than the true rate. The magnitude of bias, if any, is unknown.

## 5. WEIGHTING PROCEDURES

### 5.1 Basic Weight

In a probability sample, the sample design itself determines weights which must be used to produce unbiased estimates of the population. Each record must be weighted by the inverse of the probability of selecting the person to whom the record refers. In the example of a 2% simple random sample, this probability would be .02 for each person and the records must be weighted by  $1/.02=50$ .

### 5.2 Non-response

Notwithstanding controls, some non-response is inevitable, despite all the attempts made by the interviewers.

Non-response was compensated for by proportionally increasing the weights of responding youths. The weight of each responding record is increased by the ratio of the number of youths that should have been interviewed, divided by the number that were actually interviewed. This adjustment was done in each stratum including those created by the post-stratification by sex. It is based on the assumption that the youths that have been interviewed represent the characteristics of those that should have been interviewed. To the extent that this assumption is not true, the estimates will be somewhat biased.

### 5.3 Weighting

The principals behind the calculation of the weights for the SLS are the following:

- (1) An original sampling weight
- (2) An adjustment due to the post-stratification done by sex
- (3) An adjustment to account for non-response to the SLS.

## 6. SAMPLING ERROR

The SLS produces estimates based on information collected from and about a sample of individuals. In sample surveys, since inference is made about the entire population covered by the survey on the basis of data obtained from only a part (sample) of the population, the results are likely to be different from the "true" population values. The true population values in this context refer to the values that would have been obtained when the entire population was enumerated under the same general survey conditions. The error arising due to drawing inferences about the population on the basis of information from the sample is termed sampling error.

Since it is an unavoidable fact that estimates from a sample survey are subject to sampling error, sound statistical practice calls for researchers to provide users with some indication of the magnitude of this sampling error. This section of the appendix outlines the measures of sampling error which Statistics Canada commonly uses and which it also urges users producing estimates to use.

The sampling error, in addition to the size of the sample, depends on factors such as variability in the population, sampling design and method of estimation. For example, the sampling error depends on the stratification procedure employed, allocation of the sample, choice of sampling units and method of selection employed.

The accuracy of estimates from sample surveys is affected by both variance and bias. Under the assumption of simple random sampling within each stratum and with the further assumption of absence of bias, the variance of an estimated characteristic value is a good indicator of its reliability. Since the true variance of the estimate depends, like the estimate itself, on the whole population, it must be estimated from the available sample.

A notable feature of probability sampling is that the quality of the estimates may be estimated from the sample itself. The estimated coefficient of variation (cv) is defined as the ratio of the square root of the estimated variance to the estimate itself. Guides to the potential size of sampling errors are provided by the estimated

**Table A-1. Sampling variability guidelines for the school leavers survey**

Type of estimate	CV (in %)	Guidelines
1. Unqualified	0.0 - 16.5	Estimates can be considered for general unrestricted release. Requires no special notation.
2. Qualified	16.6 - 25.0	Estimates can be considered for general unrestricted release but should be accompanied by a warning cautioning subsequent users of the high sampling variability associated with the estimates. Such estimates are identified by the symbol *.
3. Confidential	25.1 - 33.3	Estimates can be considered for general unrestricted release only when sampling variabilities are obtained using an exact variance calculation procedure. Unless such variances are obtained, such estimates are deleted and replaced by dashes (--) .
4. Not for release	33.4 or greater	Estimates cannot be released in any form under any release OR circumstances. Such estimates are deleted and replaced by dashes (--) .

Note: These sampling variability guidelines should be applied to rounded estimates.

coefficients of variation. The quality of the estimate increases as the corresponding coefficient of variation decreases.

In this publication, where the cv is 0.0 - 16.5, the estimate is unqualified and there is no special notation in the text. For cv's 16.6 - 25.0, the estimate is qualified by an asterisk (\*) which indicates that high sampling variability is associated with the estimate and it should be viewed with caution. For cv's above 25.1, the sampling variability is too high to release an estimate (Table A-1).

## 7. SUMMARY

Much was learned from conducting the SLS. There may be a potential bias problem in the methodology used for this survey. More effective tracing methods or adjustments to correct for the bias should be examined before a similar survey is conducted. As well, the choice of the sampling frame should also be readdressed. One problem with the use of the Family Allowance files at this particular time in Canada is the federal government's announcement in the last budget of considerations to end the universality of the Family Allowance program. This would certainly reduce one's belief that the files were a complete census of young persons under the age of fifteen in Canada. Statistics Canada does have plans to look at alternative vehicles to conduct any future School Leavers Survey.

**Table A-2. Population count by stratum**

Province	18 years old	18 years old	19 years old	19 years old	20 years old	20 years old
	Potential	Non-potential	Potential	Non-potential	Potential	Non-potential
Newfoundland	111	11,424	172	11,910	181	11,703
Prince Edward Island	25	2,003	32	2,195	54	2,122
Nova Scotia	132	13,576	163	14,167	175	14,357
New Brunswick	185	11,998	270	12,261	302	12,281
Québec	557	86,514	1,096	88,579	1,046	91,928
Ontario	1,618	135,231	1,922	137,478	2,006	142,403
Manitoba	144	16,174	200	16,413	215	16,939
Saskatchewan	277	15,283	329	15,392	356	15,563
Alberta	360	34,801	499	35,567	644	36,919
British Columbia	443	40,349	460	41,159	559	44,056
<b>Canada</b>	<b>3,852</b>	<b>367,353</b>	<b>5,143</b>	<b>375,121</b>	<b>5,538</b>	<b>388,271</b>

**Table A-3. Sample count**

Province	18 years old	18 years old	19 years old	19 years old	20 years old	20 years old
	Potential	Non-potential	Potential	Non-potential	Potential	Non-potential
Newfoundland	111	209	172	173	181	469
Prince Edward Island	25	105	32	108	54	566
Nova Scotia	132	228	163	217	175	475
New Brunswick	185	165	270	105	302	368
Québec	557	353	575	415	330	370
Ontario	865	480	742	523	330	370
Manitoba	144	241	200	205	215	435
Saskatchewan	277	163	253	177	356	344
Alberta	360	290	380	270	330	370
British Columbia	443	247	411	289	330	370
<b>Canada</b>	<b>3,099</b>	<b>2,481</b>	<b>3,198</b>	<b>2,482</b>	<b>2,603</b>	<b>4,137</b>

**Table A-4. Proportion of respondents who had ever left secondary school by province and potential/non-potential stratum**

Province	Potential	Non-potential
Newfoundland	93%	24%
Prince Edward Island	92%	24%
Nova Scotia	87%	23%
New Brunswick	89%	20%
Québec	86%	23%
Ontario	83%	18%
Manitoba	86%	22%
Saskatchewan	78%	17%
Alberta	87%	17%
British Columbia	82%	17%

**Table A-5. Tracing and response rates**

	Non-response	Out of scope	Response	Total
Untraced recipient	6065	-	-	<b>6065</b>
Untraced respondent	(34%)			(34%)
Traced recipient	1134	19	-	<b>1153</b>
Untraced respondent	(6%)	(0%)		(6%)
Traced recipient	1151	171	9460	<b>10782</b>
Traced respondent	(6%)	(1%)	(53%)	(60%)
<b>Total</b>	<b>8350</b>	<b>190</b>	<b>9460</b>	<b>18000</b>
	(46%)	(1%)	(53%)	(100%)

**Table A-6. Response rates for twenty-year-olds by province and potential/non-potential stratum**

Province	Potential	Non-potential	Overall
Newfoundland	47%	69%	63%
Prince Edward Island	43%	59%	58%
Nova Scotia	38%	60%	54%
New Brunswick	49%	67%	59%
Québec	48%	59%	54%
Ontario	43%	65%	54%
Manitoba	41%	59%	53%
Saskatchewan	29%	65%	46%
Alberta	42%	56%	49%
British Columbia	38%	56%	48%
<b>Canada</b>	<b>41%</b>	<b>62%</b>	<b>54%</b>

**Table A-7. Rates for ever left secondary school for twenty-year-olds by province**

Province	Estimated rate	Coefficient of variation
Newfoundland	25.9%	7.1%
Prince Edward Island	26.8%	6.2%
Nova Scotia	25.0%	7.7%
New Brunswick	24.7%	8.3%
Québec	27.3%	8.4%
Ontario	24.7%	8.6%
Manitoba	23.5%	8.8%
Saskatchewan	17.2%	11.7%
Alberta	16.2%	12.8%
British Columbia	20.0%	11.1%
<b>Canada</b>	<b>23.7%</b>	<b>4.3%</b>

## Appendix B. Comparing the high school non-completion rate estimates produced by administrative and survey data

**Table B-1. Comparing the high school non-completion rate estimates produced by administrative and survey data**

High School Non-completion Rates (%)					
	Administrative Data		Survey Data <sup>1</sup>		
	Complement of graduation rate (89-90)	Apparent cohort dropout rate (90-91)	Census (1991)	Labour Force Survey (1991)	School Leavers Survey (1991)
<b>Canada</b>	<b>31</b>	<b>32</b>	<b>21</b>	<b>20</b>	<b>18</b>
Nfld.	33	25	29	23	24
P.E.I.	24	24	24	24	25
N.S.	30	25	26	22	22
N.B.	17	15	22	20	20
Qué.	37	28	23	19	22
Ont.	26	34	16	21	17
Man.	27	27	26	21	19
Sask.	25	24	26	18	16
Alta.	40	35	26	24	14
B.C.	36	34	22	16	16

<sup>1</sup> Estimates from survey data used in the table are based on the following definitions:

**Census:** without secondary certificate, age 20, not attending school; based on province of residence

**Labour Force Survey:** without high school graduation and without further training, age 20, annual average; based on province of residence.

**School Leavers Survey:** without high school graduation, age 20, not in school; based on province of schooling

The administrative data sources consistently yield higher estimates than the survey data. This is likely due to the combination of a number of factors: (a) the survey data will reflect recent changes in school attendance and completion, for example, during a recession, (b) the administrative data examine a phenomenon that is still taking place, the process of schooling, while the surveys attempt to capture the results of this process after it has occurred by selecting older individuals, thus accomodating transfers, interruptions, etc., (c) the surveys may have difficulty locating some of the non-completers.

Within the survey estimates there is variability in the provincial rates, particularly in the western provinces. This may reflect the fact that the SLS rates are based on the province of schooling while in the other two surveys the rates are based on the province of residence. The interprovincial migration patterns of high school non-completers needs to be examined.

Overall, some conclusions appear warranted:

- ♦ the high school non-completion rate has declined from the traditionally cited 30% to about 20%. Nevertheless, this rate is still cause for concern on account of the young age and low educational levels of high school non-completers. At a time when high paying and highly skilled jobs are valued in global economic competition, those who have not completed high school will be at a disadvantage in the labour market.
- ♦ the extent to which this decline is due to economic recession, and possibly temporary if economic conditions improve, is unknown.
- ♦ the existence of a variety of estimates, is not by itself problematic. Some techniques and data sources may be more appropriate for certain questions and issues than for others.

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